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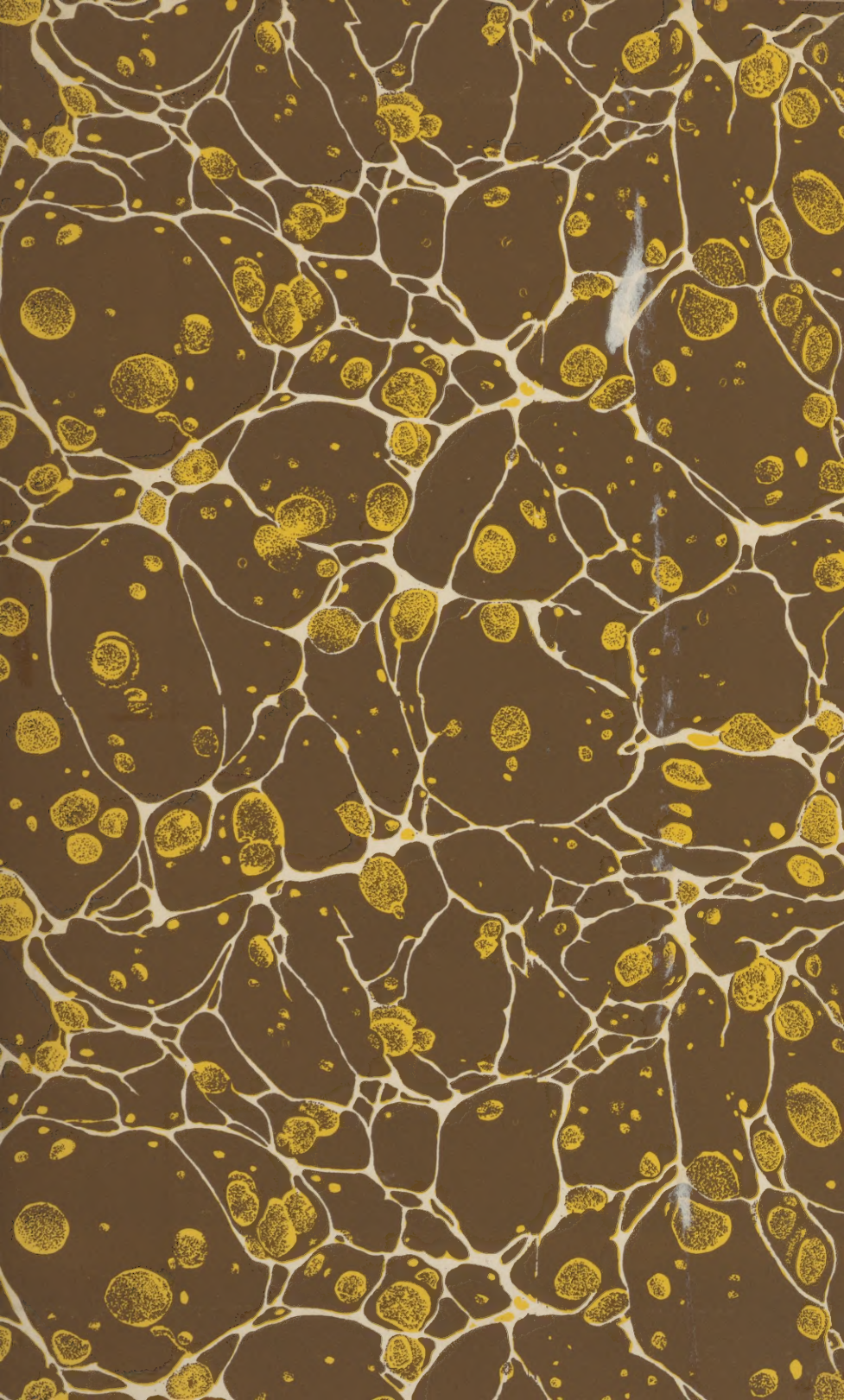


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Vol. 2.

No. 1.

April, 1898.

Medical Record

OF

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A Remedy in Nervous Disorders when Characterized by Melancholia.

—Mode of Exhibition.—

The "Reference Book of Practical Therapeutics," by Frank P. Foster, M.D., Editor of *The New York Medical Journal*, which has recently been issued by D. Appleton Co., of New York City, contains an article of which the following is an excerpt, which we feel expresses the consensus of medical opinion as adduced by actual results: "Antikamnia is an American preparation that has come into extensive use as an analgetic and antipyretic. It is a white, crystalline, odorless powder, having a slightly aromatic taste, soluble in hot water, almost insoluble in cold water, but more fully soluble in alcohol.

"As an antipyretic it acts rather more slowly than antipyrine or acetanilide, but efficiently, and it has the advantage of being free, or almost free from any depressing effect on the heart. Some observers even think that it exerts a sustaining action on the circulation. As an analgetic it is characterized by promptness of action, and freedom from the disagreeable effects of the

narcotics. It has been much used, and with very favorable results in neuralgia, influenza and various nervous disorders characterized by melancholia. The dose of antikamnia is from three to ten grains, and it is most conveniently given in the form of tablets.

We may add, that the best vehicles, from our experience, for the exhibition of antikamnia are Simple Elixir, Adjuvant Elixir or Aromatic Elixir, as also brandy, wine, whiskey. It can also be readily given in cachets or capsules, but preferably tableted as well as dry on the lozenges in powder for followed by a swallow of water. When pressed in cachets or capsules it should put into them dry. Antikamnia tablets should be crushed when very prompt effect is desired and patients should always be instructed. The conditions of the stomach frequently present unfavorable solvent influences and they can be thus overcome.

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Elix. Aurantii..... 3
Mx. Sig.:—One or two teaspoonfuls every 6 hours.
J. Watson's Clinical Record.

MEDICAL RECORD

—OF—

MISSISSIPPI.

VOL. II.

APRIL, 1898.

No. 1.

Original Articles.

Medical Inspectors of South Atlantic and Gulf Sea Ports to Discover First Case or Cases of Yellow Fever— How Best to Provide For.*

By H. H. HARALSON, M. D., BILOXI, MISS.

It is agreed by all that if yellow fever could be recognized when it first makes its appearance in a community there would be very little danger of its spreading to other communities, provided proper precautions were taken to prevent it. That all necessary precautions would be taken to prevent the spread of the disease when authoritatively announced we have no cause to doubt. In my opinion there never was a time when intelligent and courageous men as health officers were more badly needed than now—intelligent to recognize the disease, courageous to announce it. The health interests of this country should be confided to earnest, capable, fearless officials, interested by all the ties of home and citizenship in their broadest sense, and responsible either directly or indirectly to the people whom they serve.

It is important from a health stand point, and indeed from a commercial stand point to recognize the first case or cases of yellow fever that may appear in a community. It is important that the state health authorities be immediately informed of any case or cases of yellow fever that may appear at any maritime quarantine station on the South Atlantic or Gulf coast. It is

*Read before the Mobile Quarantine Convention, February, 1898.

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doubly important that this be done when there is cause to doubt the efficiency of the station or the capability of the physician in charge. Next to the question of how best to prevent the introduction of yellow fever, the most important one for this convention to decide is how to discover the first case or cases of yellow fever after it has gained entrance into the country. The conditions are such in my own state, Mississippi, that I doubt if there are five physicians on the coast of the Mexican Gulf between New Orleans and Mobile who would announce the first case of yellow fever next summer should such appear in their practice. In making this statement I disclaim any intention of reflecting upon the honesty or integrity of these gentlemen. The cause that precipitated this result is plain to every thinking man, and it has been a wonder to me that the individuals instrumental in bringing it about have not foreseen the evils to the whole country, far reaching in their nature. The physicians are not wholly, if at all, to blame. No man should be censured for declining to do a thing which he knows if he does do will ruin his business, make beggars of his wife and children, and blight his prospects in future, or at least the country can not reasonably expect him to do it. If there ever was an effort at intimidation that effort has been made by certain classes in New Orleans and along the coast of Mississippi, and with what result it remains for the future to reveal. Last year the health officers of this section of the south announced yellow fever as soon as they made the diagnosis and did every thing that scientific quarantine and sanitation could do to prevent its spread, yet they were denounced and hounded until many of them resigned. These denunciations were not inspired by motives of public good, nor to conserve the public health, nor because of failure in the performance of duty on the part of health officers so denounced, but to gratify personal spleen as well as a warning, intended not only for health officers, but even for local physicians. Many of the physicians will heed this warning and in the future decline to declare the existence of yellow fever when it appears in their practice. It has already been announced by a representative of this class in a certain town in Mississippi that if a certain health officer announces yellow fever in that town next summer they will tie his head and feet together and cast him in the Gulf of Mexico. This much of course is idle talk and will not deter that health officer from doing his duty, but its effect on the disinterested, non official prac-

itioner of medicine, one who is under no official obligation and under no requirement by law to report such, can not be denied. There is no denying the fact that the threats and denunciations indulged in by the class referred to will influence many physicians in their actions relative to reporting cases. In the larger cities there are of course physicians independent of such a class of citizenship and will not be influenced by them, but the physicians in the smaller towns along the coast are not, and will be influenced by such to a degree that may endanger the public health. Judging by the past, the smaller towns along the Gulf and South Atlantic coast are more dangerous than the larger ones. Since 1882 including that year we have had, I believe five or six outbreaks of yellow fever, all of which occurred in the smaller towns, showing the incorrectness of the only reason assigned by Dr. Gaiteras that the invasion of 1897 came through Mobile or New Orleans. We know that in 1882, in 1886 and in 1897 yellow fever made its appearance in Mississippi at points on the main land nearest Gulf Quarantine Station, Ship Island, in 1887 or 1888 it made its appearance at some point in Florida and in 1893 at Brunswick, Ga. This certainly is strong testimony that the smaller towns have at least since 1882 shown more and stronger evidences of danger than New Orleans, Galveston, Charleston, Mobile or Savannah. We have towns then on the Gulf and South Atlanta coast, judging by the past, which will bear watching in the future, towns too where, all will agree, the physicians will be less inclined to announce yellow fever should it appear in their practice.

With these facts before us, surely some steps are necessary to be taken in order to protect the interior southern country from places on the Gulf and South Atlantic coast with such dangerous environments. We have the coast of eight states included in this dangerous territory, some of course are more dangerous than others, viz. South Carolina, North Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and Texas. That some steps should be taken by these states or by the general government for these states precautionary in character against the first case of yellow fever there can be no doubt. The health of the south and the commerce of the entire country demand it. Even if the first few cases of yellow fever could be recognized we would never have an epidemic of yellow fever in the South.

The Caffery bill now pending in Congress provides for the

appointment of port sanitary inspectors by the Surgeon General of the Marine Hospital Service whenever and where ever, in the judgment of that official, it is necessary to make such appointments. Judging by the salary that these inspectors are to be paid, one thousand dollars per annum, I infer that they are expected to be practicing physicians at the ports where they are appointed to serve. My experience and observation convinces me that the official who is expected to declare the existence of yellow fever in a town should be free from, and independent of any local influences. Besides the salary to be paid would not justify an appointee in making yellow fever a special study which should be done by inspectors engaged in this important work.

The bill of the American Medical Association and of the American Public Health Association which has gone to the Senate calendar with an unfavorable report from the committee to which the bill was referred, provides for the establishment of a department of public health or a commission of public health to be under the control of a commissioner who shall be a physician and sanitarian, appointed by the president by and with the advice and consent of the Senate. This bill also provides for an advisory council to be called semi-annually by the commissioner and presided over by this officer, and composed of the secretary or executive officer of each state or territorial board of health, and one officer learned in the law to be detailed from the department of justice by the Attorney General of the United States. There are many reasons why this bill should become a law and it will become such sooner or later. This bill provides for the appointment of six sanitary inspectors, two of whom shall be experts in quarantine matters, and at least two skilled bacteriologists. It should go further, and provide for the appointment of eight Gulf and South Atlantic coast medical inspectors, one from each of the following states: North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and Texas. These inspectors should be appointed for terms of eight years. They should be immune physicians who have had experience with yellow fever. They should be nominated by their respective state boards of health and upon this nomination appointed by the commission of public health, to which they should be responsible for their official actions. The advisory council of the commission of public health should formulate specific regulations for the guidance of these inspectors, and should distribute the cost from

the northern limits of North Carolina to the western limits of Texas between the eight inspectors requiring a thorough inspection of every town along this entire coast as often as every two weeks and some of them even oftener than this.

One of the great difficulties in diagnosing the first case or cases of yellow fever is from a lack of familiarity with the disease. This disease does not often make its appearance in this country and when it does only a comparatively small number of physicians see it. A physician may have gone through the epidemic of 1878, and may have seen hundreds of cases then and not another until 1897, but in the mean time has been, each summer, treating the fevers incident to this southern country, which in many respects resemble yellow fever in its milder forms. It is hardly to be expected of this physician to make a diagnosis of the first case or the first few cases, and especially if these cases are of the milder type. But take the physician who is familiar with the disease and whose business it is to look for it and he would hardly fail to make a correct diagnosis. During last August and the first of September, five days were spent at different times by members of three state boards of health and by a representative of the Marine Hospital Service in the little town of Ocean Springs studying a disease that was then prevailing there, and which had then become epidemic. Several of these gentlemen had had large experience with yellow fever, yet they failed at first to recognize the true character of the disease. This was a fatal mistake and was regarded by many as inexcusable. On the 8th of September, two days after a diagnosis had been made by three state boards of health and a representative of the Marine Hospital Service, the distinguished Dr. John Guiteras, representing the Marine Hospital Service, visited Ocean Springs and after examining twenty-eight cases reported that twenty-five were unquestioned dengue and only three at all suspicious of yellow fever. This report was made in the face of the diagnosis that had already been made and with a full knowledge of the pathological findings of two autopsies which had been held by the gentlemen making the diagnosis. He reported later that there were a few cases of yellow fever at Ocean Springs in the midst of a wide spread epidemic of dengue. The Surgeon General, I do not believe will repudiate this diagnosis of Dr. Guiteras, yet unless he does, it will be impossible to determine which in the midst of this wide spread epidemic of dengue, was the first

case of yellow fever, and consequently the origin of the fever can never be settled by that service. Personally I believe that Dr. Guiteras made a mistake as did the other gentlemen, of whom I was one, who first declared the disease to be dengue, but later yellow fever. I believe further that the mistake was due to a lack of familiarity with the disease. Some of these gentlemen, as above stated had had large experience with yellow fever, but it had been a long time since they had seen a case and consequently many of the diagnostic points were not fresh in their minds. This is a difficulty that will arise with the inspectors and to make them efficient must be corrected. In April or May or some other month, if thought best, of each year four of these inspectors should be sent to Cuba or some other southern country, there to study and familiarize themselves with the disease. The next year the other four should be sent. These visits should consume only enough time to see and study cases so that familiarity with the disease every two years ought to keep a physician reasonably familiar with it, and by alternating as above indicated all the inspectors would see yellow fever every two years.

Every town and village along the the coast of these eight states should be inspected every two weeks, and some of them even oftener than this. At each visit the inspector should see in person every physician in the town, and ascertain the exact health condition of that town. Of course in the larger cities it would be impossible to see all the physicians in the space of time allotted but enough of them could be seen and a sufficient number of the hospitals visited to enable the inspector to arrive at a correct conclusion as to the health condition of the city. If at any of the visits a case of sickness regarded as suspicious be discovered by the inspector and he is unable to make a diagnosis, and desire to keep the case under observation for a time it should be isolated, together with those exposed, and guarded until a correct diagnosis can be made. As soon as a conclusion can be reached, and that conclusion is that the case is one of yellow fever, the executive health officer of the State in which the disease occurs, who it will be remembered is a member of the advisory council of this commission of public health, should be notified, and the case or locality turned over to said health officer, relieving the inspector of any further duty or responsibility as to the isolation of the case or quarring the locality. The com-

missioner of the public health commission should be notified of the existence of the case at the same time the State executive officer is notified.

These inspectors should be allowed to go into any town or city within the States represented by them, and the physicians of these States should be required, under law, to report to them when called upon to do so, and render them such other assistance as may be necessary in their investigations. No local health board or town authorities should be allowed to prohibit such investigations as, in the judgment of the inspectors, may be necessary.

These inspectors should be paid a salary sufficiently large to secure capable and experienced men, and they should not be allowed to engage in the practice of medicine during their terms of office. This would not only make them independent of local influences, but would place them in the best position possible to cultivate to an advantage the physicians included in their territory.

It should also be the duty of these inspectors to use such means as to them and the advisory council of the commission of public health may seem best to educate the people on questions of quarantine and the absolute harmlessness of a case of yellow fever when properly isolated and guarded, and the utter senselessness and folly of every little town throughout the entire South quarantining against an infected town when the infected town is properly cordoned, and people and merchandise prohibited from leaving that town except under proper restrictions.

Let such a system of inspection as I have mentioned prevail in these Southern States and it would not be long before the announcement of a case of yellow fever in any of their towns would create no more alarm, nor would it interfere with commerce any more than the announcement of a case of yellow fever at a near by maritime quarantine station. The people would soon come to know that the disease when taken in time can be bridled and its ravages checked. It can never be met successfully in its onset or when it first invades a town without a thorough system of inspection by men independent of local influences.

To conclude:

1. Judging by the past, yellow fever is as liable to invade this country through the small coast towns as through the commercial centers.

2. The practicing physicians of the south Atlantic and gulf coast are reluctant to declare the existence of yellow fever in their respective towns.

3. When yellow fever is discovered to exist in a town sufficiently early, and proper precautions taken to prevent its spread, there is little or no danger to adjacent communities and no necessity exists for the disruption of the commercial relations of the country.

4. Each of the gulf and south Atlantic coast States should be provided with one or more medical inspectors to discover yellow fever when it first makes its appearance in the country, who should be appointed upon the recommendation of their respective State boards of health, should be capable, experienced, immune physicians, and should be entirely free from local influences.

Eczema Rubrum.

By G. A. HENDON, M. D.

Demonstrator of Chemistry Hospital College of Medicine, Louisville, Ky; Lecturer on Urinalysis Louisville Training School for Nurses.

In October, 1897, I was consulted by Mr. W—, of Uptonville, Ky., for a condition that I shall describe as follows: Patient aged 65 years. When a child, eight years of age, had tuberculosis of the knee joint which was allowed to run its course without surgical interference and resulted in destruction of the bony elements and suppuration of the joint, leaving it ankylosed and bent at an angle of about 45 degrees, with the muscular tissues between knee and ankle greatly atrophied, the affected limb being about half the size of the other. Patient enjoyed health and comfort, was able to perform ordinary farm labor. About twelve years ago he began to be annoyed by an itching around the instep and ankle that continued to increase in severity until the whole limb from knee to toes was covered with an itching, burning sensation, associated with destruction of epidermis, exposing the derma which presented an intense fiery red appearance. The whole surface secreted a thin serum that excoriated the tissues wherever it came in contact with them. The amount was so great that when the limb was held horizontally the secretion would fall in rapidly succeeding drops to the floor. Dressings would become saturated in a few hours after their ap-

plication. This condition had lasted, as before stated, during a period of twelve years, pursuing an irregular course, at times healing up almost entirely, except around the ankle and instep, only to break out with renewed fury in a few days. The patient declared to me that in the whole twelve years of his suffering he had never been able to sleep with his foot under the cover, it mattered not how cold the weather was. As a matter of course the condition was much exaggerated in summer. The case came to me with the history detailed above and about the same condition existing that I have already described in its worst form. Various methods of treatment had been tried from time to time without accomplishing any material benefit. After making a thorough examination I diagnosed the case as one of *eczema rubrum* and recognized the difficulty in effecting a cure on account of the imperfect circulation which depended upon the muscular atrophy of the limb. The blood vessels were deprived of their natural support by the degeneration of the muscles.

My first step in treatment was to give the limb a surgical bath, which consisted of washing well with green soap and water and shaving clean. Then I bathed the limb in a solution of bichloride 1-3000 and sprayed it all over with peroxide of hydrogen, full strength, and dried it thoroughly, dusted it well with talcum powder, enveloped it in sterilized gauze and absorbent cotton, over which I applied a snug fitting flannel bandage. I instructed my patient to keep his leg elevated as much as possible and to return to my office every day for treatment. During the succeeding twenty-four hours marked improvement was noted and the limb was again dressed as above, but at the next dressing the patient reported a sleepless night and the gauze and cotton was saturated with the secretions. This method I continued, my patient's condition apparently growing worse all the time, and he was becoming rapidly discouraged. At the end of a week I terminated his visits to my office, ordered him to stay off his feet absolutely and instructed him to remain in bed or to sit in a chair with his leg supported on another chair in which a pillow had been placed. I visited him every day and dressed the leg as above described, not using the bichloride or shaving after the first dressing and alternating each day between the application of a drying powder and an ointment composed of balsam peru, boric acid and lanolin. I continued to use the peroxide spray every day and gave him internally calcium sulphide $\frac{1}{2}$ grain four

times daily. After the institution of this treatment improvement was apparent at once, and at the end of four weeks I sent my patient to his home in Uptonville, sixty miles from here, sound and well and happy, having by this simple procedure relieved him of a trouble, that he characterized as "terrifying," of twelve years duration. It has now been five months since I saw him, but I receive intelligence each week that there has been no sign of a reappearance of the disease. I instructed him to continue the use of the flannel bandage, for reasons I shall state further on. I procured for him an elastic bandage, one of the web kind, but he complained so bitterly of the discomfort produced by it that I discarded it in favor of the flannel roller which seemed to do as much good and was far more grateful to the feelings of my patient. I consider the essential element in the treatment of this case to be the support supplied the circulation by placing the limb in a horizontal position; thus I furnished nature an opportunity to carry on a reparative process by supplying the part with abundant nutrition. I also attach great importance to the peroxide spray which did more to allay the itching than any agent I have ever had experience with. I have to state, also, that during the time my patient was under treatment his hands and arms almost up to the elbows were attacked with the disease, but yielded readily to the application of the peroxide and the ointment before mentioned.

Summer Diarrhœas of Children.*

By I. H. C. COOK, M. D., HATTIESBURG, MISS.

The above subject has, no doubt, by many of you seemed to be worn threadbare, but my excuse for writing an article on the subject at the present time is the frequency of the disease and its great fatality in our climate.

Diarrhœa is a term which only describes a symptom, and does not constitute a disease by itself, but is frequently used in that sense.

The usual method of authors in writing a thesis on any subject in medicine, is to state in a systematic way: First, the diagnosis; second, the cause or *materies morbi*; third, pathology:

*Read before the Mississippi State Medical Association, April, 1897.

fourth, prognosis, and fifth its treatment. This plan will be followed as near as possible in this paper.

DIAGNOSIS.—Summer diarrhœa of infancy is usually meant to apply to all looseness of the discharges from the bowels beyond the normal, occurring during the summer solstice, and are usually divided into an acute and chronic form.

CAUSES.—The causes of this disease are various indeed, but the principal exciting cause is recognized as the excessive heat of summer, bringing about a variety of conditions, both of an atmospheric and circumstantial nature. The atmospheric condition is one of extreme heat. The circumstantial conditions are those resulting from surrounding circumstances, such as diet, squalor, filth and a general unhygienic condition. Most cases originate from excess of heat. A short exposure in the hot sun, of a tender child, I have known to result in this condition without any other known cause operating.

The attack usually comes on suddenly after an unusually hot, sultry day or night, or after exposure for a short time in the hot sun or in a close, hot room.

There is usually high temperature in the acute stage, associated with restlessness, nausea, vomiting and purging of a bad brassy smelling discharge from the bowels, attended with sighing and jactitation and great thirst. Following this is the stage of collapse. The pulse and skin are variable; sometimes the skin is moist, sometimes hot and dry. The pulse is full and frequent in the first part of the attack, but becomes frequent and small and very weak in the second stage.

I have described here a typical case, one usually called cholera infantum.

These cases are not all so typical or so severe, but mild or severe they have many symptoms in common. The first discharges are mixed with the sour-smelling undigested food, but afterward contain only a thin or thick mucous, mixed usually with a little blood and shreds of mucous membrane. The color, from being at first light, rapidly changes to a dark greenish color; the child, if the case be severe, gradually becomes comatose, is easily aroused but rouses in a fright and will commonly drop back into a stupor. The discharges now become of an involuntary character.

The temperature in the first stage usually runs up to 103 and 104 degrees Fahrenheit till the profuse diarrhœa sets in,

when it drops down to 101 to 102 degrees Fahrenheit, the higher temperature being in the evening.

If these cases receive proper treatment they usually recover in seven or eight days, so that they will have missed abnormal temperature and the diarrhoea will have been controlled; but if a temporizing treatment has been carried out they will gradually reach the chronic stage, provided they have not died before this. The chronic form consists of a continuance of the acute stage, but there now is more blood, less nausea and vomiting; the tongue gradually becomes clean, becomes red at the edges; the child becomes irritable and is greatly emaciated.

There is often at this stage a true stomatitis or inflamed condition of the fauces, gums and tongue. This stage goes on till the child dies from inanition or is gradually restored to health by proper treatment.

It is now denied by a goodly number of the profession that dentition causes any trouble of the bowels in children. I believe that it is frequently an influencing factor, especially during the second year of dentition and more especially when the canine and stomach teeth are coming through the gums, for I have too often seen relief from cutting the gums down to the teeth.

The chief cause is undoubtedly the effect of heat on the vaso-motor nerve centers together with the inhibition of indigestible substances.

The pathology of this disease seems to be at first a congestion of the bowels and chylipoietic viscera and extends when unchecked into a true inflammation of the bowels.

The prognosis is dependent upon various conditions. If in the family of the intelligent and those who have the comforts of life, and surrounded by correct sanitation, especially in the country, the prognosis is favorable. If the case is among the ignorant and among the extremely poor in either country or city, it is not so good. Even among the intelligent, where there is bad sanitary surroundings, the prognosis is unfavorable.

TREATMENT.

I will not undertake here to give all the various treatments urged by the different authors, but will give the treatment found most effectual in my experience.

In this as in many, if not all other diseases, an "ounce of prevention is worth a pound of cure." To prevent the disease is the best part of our duty, if we could succeed in so doing, but

unfortunately for the people and may be fortunately for us, we fail to carry this to a success. The best prevention is to keep the child from the extremes of heat by various means, such as in open, cool rooms, out of the hot sun and by aid of baths.

Whenever a child begins to fret from heat, the indication is plainly to reduce the temperature, and the quickest way to do this and the safest method is by means of the tepid bath. This can be repeated several times a day and at bedtime if need be. However, once in the forenoon and once or twice in the afternoon usually suffices. The child should not be allowed to remain longer than two or three minutes in the bath ordinarily, as there is danger of chilling the surface and this is an effect we do not desire.

Now, the child has the disease in the acute form and we are at the bedside. What are we to do?

First, reduce the temperature by means of the bath down to at least 100 degrees Fahrenheit, which will usually be done in from three to five minutes. After removing the child from the bath, wrap it comfortably after rubbing it off dry. Repeat the bath as often as is necessary to keep the temperature in proper bounds, not allowing it, if possible, to go over 100 degrees Fahrenheit, as 101 degrees Fahrenheit is a high temperature for a child to stand long.

Second, quiet the vasomotor nerve centers. The bath usually does this temporarily, but for a permanent effect and to aid the bath we use a mild opiate. A combination of elixir codeine or pappine with elixir or syrup of fennel answers the purpose well.

The third indication is to bring about a normal condition of the secretions. A combination of mild chloride of mercury in the formula below answers as well as any I have used:

R.—Calomel gr. ii, bismuth sub. nit. gr. xxx m div. in chart No. xii. Sig: One every hour; or calomel gr. iij, soda bicarb. gr. xv div. in chart No. x. Sig: One every hour or two hours till the discharges are changed and the tongue is cleaned off.

The thirst is very troublesome, and while the baths modify this condition, it is best to allow frequent drinks of water that has boiled and allowed to cool. It is best, however, not to allow large draughts of water till the mild chloride has relieved the nausea and vomiting, which it will usually do after a few doses are retained. Sometimes the application of cold cloths to the

stomach and bowels gives great relief; especially where there is great heat in those regions. On the contrary sometimes warmth relieves the symptoms of pain and nausea, especially in the later stage of the disease. This will have to be left to a great extent to the effect each application may have as to the comfort or non-comfort of the patient.

If there should be a remission of the accompanying fever or a history of intermission with a malarial cachexia we should resort to some preparation of the peruvian bark.

The tasteless forms of quinia can generally be given after beginning with the calomel and can be repeated as often as necessary to suit the gravity of the malarial symptoms.

The digestive tract is usually left in a very weakened condition and it is difficult to get it back into a normal state. Some preparation of pepsine should be given after each time of taking food. Milk and lime water in a general way agrees with most cases after a few doses of calomel have been retained and the fever lessened. Malted milk (Horlick's) I have found to be palatable and readily assimilable in most cases, but all milk has to be given with care and the discharges carefully noticed to see that it does not form curds in the intestinal tract and irritate the bowels and produce harm instead of good. Lactated food, chicken broth, beef broth, are all good where milk disagrees. Sweet milk is not safely given alone where there is much fever, and I make it a rule not to give it.

In the chronic form when it is generally of no necessity to give the mercury, it becomes expedient at times to give something off the partially digested food and debris from the bowels. In this case the aromatic syrup of rhubarb, together with flushing the rectum and colon by means of a fountain syringe answers well. This is sometimes necessary also in the later part of the acute form where there is great tenesmus. The water should have been boiled, and use it as hot at first as can be borne and the flushing continued at least till the water returns clear. The injections should be without force, slowly and not in haste as the water will be forcibly expelled and fail of its purpose, and the child will bring all its power of resistance into play.

If the gums are swollen, especially, if the canine or bicuspid teeth are trying to come through, cut the gums down to the teeth.

The preparations of pepsine I prefer and use, those con-

taining a considerable amount of diastase maltopepsine (Tilden & Co.), has long been a chief reliance with me, in form as below:

R.—Maltopepsine.....3vj
 Glycerine.....3iij
 Water, qs ad.....3viiij

M.—Sig.—Teaspoonful after food.

If not obtainable the Lacto-peptin may be used or liquid diastase. Taka diastase has been highly recommended.

If an excessively acid condition of the prima vial continues to exist, the sub. nit. bismuth is combined in the above prescription so as to give from eight to ten grains at a dose, the dose being one teaspoonful after each discharge and after each meal.

Frequently, nothing will do more than keep them alive till cool weather approaches and cools the atmosphere, when they rapidly recover.

I have seen some cases of the chronic form improve on a preparation of syrup of columbo, gentian, rhubarb and elixir of pepsine. This is given before nourishment is taken.

Correspondence.

I deem the following letter, from a prominent physician of this State, of sufficient importance to give it to the profession. The State Medical Association, when it meets April 20th, should take some action in this matter. It might be a good idea for the Association to address a communication to the circuit judges of the State asking them to see that this important law is enforced. There is no doubt but that the physicians of the State can have the law enforced if they will interest themselves in the matter:

—, March 19, 1898.

Dr. J. R. Tackett, Biloxi, Miss.

Dear Doctor—In view of the early meeting of the Medical Association and also Board of Medical Examiners, I would like to call the attention of Dr. Haralson (through yourself—if you will permit me to use you as a medium) to the rapidly growing evil of the practice of medicine and surgery in our State, without license. I was asked a few days ago, by a recent graduate, if I thought it necessary for him to appear before the Board of

Examiners, and giving as a reason for the above interrogation that he knew parties who had practiced several years past without being molested, who had neither a diploma nor license. That the above is true, most physicians in this section of the State can corroborate. It is equally true that when the grand jury indict them for repeated offenses that the district attorney has always permitted them to plead guilty to one indictment, pay a small fine of about \$20 and continue practicing without further molestation. There has (so I am reliably informed) located in an adjoining county, a man who attended lectures in Memphis three weeks only, and this self constituted M. D. has thrown his "shingle to the breezes" and now competes with graduates who have spared neither time nor money to render them proficient in their profession. That such Quacks can not be dealt with by our present law is demonstrated at nearly every circuit court in our land, and the medical laws are set at naught and made a mockery.

It will probably be impossible for me to attend the coming meeting of the Medical Association, on account of professional engagements. I do not write this because any of the above class have gotten in my way, but simply because I desire to see the law and dignity of our profession upheld.

Knowing that you are in close touch with Dr. H., I deemed this the best method of attracting his attention to this rapidly growing evil, that they (the Board) might find a remedy. And if it cannot be found then let us repeal the "dead law" and "let down the bars."

Yours fraternally,

XXXXX.

It has been only a few weeks since statements made in the following letter taken from the *Journal of the American Medical Association* were corroborated by Prof. John B. Elliott in a consultation with the writer. In the case under consultation Prof. Elliot suggested the discontinuance of Quinine and the use of Fowler's solution of Arsenic.

MALARIA INFECTION.

CHARLOTTE, N. C., March 7, 1898.

To the Editor:—In your remarks under the above heading, in the issue of March 5, 1898 (page 561), you make some statements which appear to deserve some qualification, at least from

my information and experience on the subject. That there is a form of malaria (the disease) which resists the therapeutic action of quinin even when in proper dosage by the stomach, rectum and skin, is within the experience of a number of physicians throughout the South. This form of malaria, designated the *estivo autumnal*, will not infrequently persist in spite of the exhibition of large and repeated dosage of quinin, the patient dying literally saturated with the drug and thoroughly cinchonized. Dr. Osler, the highly gifted and capable authority quoted to support the points of the editorial, has given absolute testimony to the fact that quinin will not remove the crescentic forms from the blood and that the fever will persist in spite of its use. Writing to me in answer to a communication, he replies to the question as to whether in his experience there was a form of malarial fever that resisted quinin: "Yes, the *estivo-autumnal* resists in certain phases. The organism—crescents—do not disappear." I take this to mean that there is a form of malaria which will not yield to quinin no matter how employed. The action of quinin upon certain types of malaria is very positive and undisputed. There are, however, phases or stages of what was doubtless originally a purely malarial affection, yet the precise nature of the pathologic phenomena soon becomes obscure and we deal with agencies supplementary to those originally and still present.

Exactly what constitutes this addition to the crescents already present in the blood, we have no present adequate answer. We know enough to know that the pathologic condition is not amenable to the therapeusis of quinin, no matter how much or by what avenue it reaches the blood.

Respectfully, J. WELLINGTON BYERS, M. D.

The American Medical Association---Fifty-First Annual Announcement.

OFFICE OF THE PERMANENT SECRETARY, }
1400 PINE STREET, PHILADELPHIA, }

The Forty-ninth Annual Session will be held in Denver, Colo., on Tuesday, Wednesday, Thursday and Friday, June 7, 8, 9 and 10, commencing on Tuesday, at 10 a. m.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such county and district Medical Societies *as are recognized by representation in their respective State societies*, and from the medical departments

of the Army and Navy and the Marine Hospital Service of the United States.

"Each State, county and district Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; *Provided*, however, that the number of delegates for any particular State, Territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Members by Application.—Members by application shall consist of such members of the State, county and district Medical Societies entitled to representation in this Association as shall make application in writing to the treasurer, and accompany said application with a certificate of good standing signed by the president and secretary of the society of which they are members, and the amount of the annual subscription fee, \$5. They shall have their names upon the roll, and have all the rights and privileges accorded to *permanent members*, and shall retain their membership upon the same terms.

The following resolution was adopted at the session of 1888:

That in future each delegate or permanent member shall, when he registers, also record the name of the Section, if any that he will attend, and in which he will cast his vote for Section officers.

Secretaries of Medical Societies, *as above designated*, are earnestly requested to forward, *at once*, lists of their delegates.

Addresses.—Presidential Address, Geo. M. Stenberg, Washington, D. C. Address in Surgery, J. B. Murphy, Chicago. Address in Medicine, J. H. Musser, Philadelphia. Address in State Medicine, ———.

Committee of Arrangements.—J. W. Graham, Denver, Colo.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.

Offered by W. L. Wells:

Art. IV.—Officers. Amend to read "Each officer shall hold his appointment for one year, and until another is elected to succeed him."

Offered by H. B. Ellis:

Art. IX.—Conditions for further representation. "Any State or local Medical Society, or other organized institution whose rules, regulations and code of ethics agree in principle with those

of this Association may be entitled to representation on the advice or agreement of the Judicial Council."

"That the name of the Section on Dental and Oral Surgery be changed to that of Section on Stomatology."

Offered by L. D. Bulkley:

"That all new business shall be introduced not later than the third day of the session."

At the last session it was agreed that all committees having reports of public interest, and particularly matters pertaining to legislation, be instructed to make their reports on the second day at the General Session.

EXTRACTS FROM BY-LAWS.

"The chairman of each Section shall prepare an address on the recent advancements in the branches belonging to his Section, including suggestions in regard to improvements in methods of work, and present the same to the Section over which he presides, on the first day of the annual meeting. The reading of such address not to occupy more than forty minutes."—*By-Law.*

"It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections to forward either the paper or a title indicative of its contents and length (not to exceed twenty minutes in reading) to the secretary of Section, at least one month before the annual meeting at which the paper or report is to be read."—*By-Laws.*

4.—*Publication of Papers and Reports.* "Every paper received by this Association and ordered to be published, and all plates or other means of illustration, shall be considered the exclusive property of the Association, and shall be published and sold for the exclusive benefit of the Association."—*By-Laws.*

WM. B. ATKINSON, Permanent Secretary.

Food Manufacturers vs. Physicians.

February 12, 1898.

To The Imperial Granum Co., New Haven, Conn.

Dear Sirs:—Herewith we return the "xxxx Food" letter.

This taking complete charge of the nutrition of the young child, regardless of the attending physician, does an injury to the entire medical profession. You do not do this, therefore, any agitation thus awakened will inure to your benefit.

Nearly every medical publisher will join the crusade against the manufacturer who thus ignores the physician.

You have admirable testimonials from physicians, but others can buy, or manufacture, as good ones. Attack them on their weakest point.

Interest physicians, editors and writers in this matter of street-car, bill-board, daily newspaper, direct appeal, and medical advice advertising.

We will try to do our share to arouse physicians in the matter. Yours very truly, XXXXXXXX.

TYPHO-MALARIA.—Is there a typho-malarial fever? Yes, in the brains of the doctor, but not in the bodies of the patients. There is no combined hybrid disease and it is only due to Woodward to say that he did not recognize a hybrid disease. Typho-malaria is a villainous name and should be banished from our vocabularies and no doctor should ever use it, particularly to his patients. It gives a man a wrong sense of security and the doctor wastes a lot of good medicine, a lot of quinine, for instance, because he thinks there is some symptom that points to malaria. I am happy to say that cases of typho-malaria are disappearing slowly from the health reports; they ought to be banished entirely. Chills, as I told you, occur frequently at the outset of a disease, and they may occur throughout the course of a typhoid fever. The State board of health should hereafter return to every physician who sends in a diagnosis of typho-malaria his blank and ask for something better. It is too late in the day, gentlemen, to make that diagnosis.—Dr. William Osler, in *Maryland Medical Journal*.

Editorial.

H. H. HARALSON, M. D., - - - - - BILOXI, MISSISSIPPI.

Editor and Proprietor.

SUBSCRIPTION: ONE DOLLAR PER ANNUM.

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MISSISSIPPI STATE MEDICAL ASSOCIATION.

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 Corresponding Secretary—D. S. HUMPHREYS, M. D. Greenwood.

SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

The Modern Treatment of Diphtheria is the title of an article by Dr. Shelby in Pennsylvania. It has been two years since he first used the serum treatment in all cases of diphtheria coming under his care. His work has been confined to private practice, and the cases reported were seen on the second or third day after the outset of the disease.

He treated thirteen cases in all, and three of them would have died under former method of treatment. He does not rely on antitoxin alone but uses local and constitutional treatment as well. He gives special attention to local treatment. He uses every two hours, night and day, as a spray, the following:

R. Peroxide of Hydrogen 1 pint.
 Dobell's Solution 4-6 pints.

He also uses a spray of a solution of bichloride of mercury 1-5,000 three times a day.

Continuing he says:

"Lœffler's solution on cotton, with applicator firmly pressed against the exudate 10 to 20 seconds every four hours. This contains:

R. Menthol	10 grains,
Toluene q. s. ad.....	36 c c,
then add	
Creolin	2 c c,
Solution of Chloride of Iron.....	4 c c,
Alcohol q. s. ad.....	100 c c,

Bathing throat with spirits of turpentine twice a day. The ice bag or ice collar to reduce local œdema and swelling of lymphatic glands.

Internally I use from the onset nitroglycerin and strychnine to support the heart's action, and a favorite mixture containing:

R. Tr. Ferri Chloridi.....	gtt x,
Hydrarg. Chloridi Corrosivi.....	gr. 1-30,
Quin. Bi-suphatis.....	gr. 11,
Glycerini	gtt xv,
Syr. Aurantii q. s.....	f ʒi.

This dose repeated every four hours, regulated, of course, to suit age and conditions.

Free administration of whiskey, fʒii. to fʒiv., with four ounces of milk every two hours, day and night. Also, in cases attended with great anorexia, $\frac{1}{4}$ gr. calomel every two hours until it produces free catharsis; then a smaller dose, 1-12 gr. every four hours throughout the attack. I believe this last mentioned remedy to be of special utility in the laryngeal form of the disorder. In cases of great heart depression, I push the strychnine to its full tolerance, both hypodermically and by the mouth. As soon as the diagnosis is made, I inject either 10 cc. of anti-diphtheritic serum—1,500 or 2,000 immunizing units, Behring's standard—according to age and severity of attack, with all antiseptic precautions, into the subcutaneous tissues of back or abdomen. When no marked improvement or reaction in temperature, etc., follows, and always in laryngeal diphtheria, they are given another dose of same strength 12 hours later. I have even given the third dose in great laryngeal stenosis, five or six hours later, when indicated. The remedy must be pushed to the full extent in urgent cases. I have not noted any deleterious effects in any of the thirteen cases treated; on the contrary, marked improvement almost from the beginning of the treatment."

Dr. Shelby reports at length the thirteen cases treated by him, and concluded his interesting article as follows:

"In conclusion I wish to quote from an article by Dr. H. C. Wood, on "The Use of Animal Extracts," as follows: I am absolutely of the opinion that the value of the serum treatment has been sufficiently shown to require every conscientious physician to use antitoxin in diphtheria just as much as he would use quinine in malaria." I am confident this expresses tersely and conclusively the status presens of the antitoxin treatment of diphtheria. I am sure that three of my cases, Nos. VI., IX., and XIII., would have been attended by fatal results under the old methods of treatment. I have never seen a recovery from a genuine laryngeal diphtheria. Again, it cuts short from one to two weeks all cases of diphtheria when the serum is used early and in sufficient quantity, and by that much lessens the danger of septic infection to the patient, and also lessens the danger to other members of the same family contracting the disease.

I have no experience with the serum as an immunizing agent, as I always enforce strict quarantine and have never had the second case in the same family at the same time.

I also attribute some of this success to the thorough local antiseptic treatment to which I subject all cases, thus lessening the danger of re-infection and also to others who may come in contact with the patient during convalescence, as it has been well demonstrated that the specific bacilli are still present in the throat in most cases after all membrane has disappeared.

Again I believe subsidiary treatment, such as outlined at the head of this article, is also of prime importance in preventing septic infection and supporting nature in her efforts to rid the system of the diphtheria poison.

Finally, I would call your attention to the marked absence of dangerous sequelæ in the series of reported cases."

In an article, *Buffalo Medical Journal*, Dr. F. H. Stanbro, New York, makes the statement that 95 per cent. of diarrheal diseases in children occurs in bottle fed children. Mother's milk he regards as the ideal baby food, but when he finds that a nursing baby under his care is not thriving he examines the milk of the mother and if it shows a condition that cannot be remedied he has the infant weaned. He has had no success with the arti-

ficial so-called "foods" of the market, but relies on cow's milk properly diluted and modified. He prefers that it be diluted with barley water, oat meal water or lime water. He also sweetens with cane sugar and adds a little salt. He differs with Jacobi as to the virtue of lime water, saying that it has always worked well in his practice.

The esteemed *Memphis Medical Monthly* thinks that government control is the only feasible and truly efficacious means by which complete protection from invasion of foreign born epidemic-disease is to be obtained, and the logical hands into which quarantine control should be placed are those of the Marine Hospital Service. Surely past events do not warrant this conclusion, but to the contrary, that the federal government through the Marine Hospital Service has more than once proven its inefficiency in keeping yellow fever out of this country. According to the public health reports of this service there are twenty quarantine and inspecting stations on the coast of the south Atlantic and gulf States. Four of these are operated by the Marine Hospital Service and sixteen by the States. All of the quarantine stations of the commercial cities, viz: New Orleans, Mobile, Charleston, Savannah and Galveston are operated by the States. The *Monthly* will readily agree that these cities are more liable to invasion because they treat so many more vessels, yet with all this, since 1882, the federal government, under the "efficient" management of the Marine Hospital Service with its present "high standard of efficiency," has admitted yellow fever three times through its four stations while the States have admitted it once through their sixteen stations. It seems that each time the Marine Hospital Service admits an epidemic disease there is at once a demand for an enlargement of its power and the more power that is given it the oftener it admits the disease. It has now all the power that any service ought to want to do effective work. It makes inspections of State quarantine stations and if they are not efficient it has the power, under the present law, to take charge and do the work. If the thing was reversed for awhile, and the States given power to inspect the National stations, with powers to take charge if the stations of this service were not effective, we would have fewer invasions of yellow fever in the South.

Public Health.

Board of Health, State of Mississippi.

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W. S. GREENE, M. D., Aberdeen.

H. H. HARALSON, M. D., Biloxi.

* * *

PROGRESS IN FORMALDEHYD DISINFECTION.—For two years the Chicago Health Department has been investigating the claims made for formaldehyd as a disinfectant with especial reference to the practicability and value of its use for household or domestic disinfection. For this latter purpose the following requirements must be met: 1. A light, portable apparatus of simple construction and easy manipulation. 2. The evolution of a quantity of the gas in from one hour to hour and a half sufficient for the area to be disinfected. 3. The killing of a majority of all non-spore-bearing bacteria, both in a moist and in a dry state, in a six-hour exposure, and some degree of penetration in this time. 4. Reasonable cost of disinfection per 1000 cubic feet. These requirements are made necessary by the conditions under which most of the department disinfections are made. The greater number are in the poorer districts of the city, where the dwellings and apartments are of loose construction and not uniformly warmed in cold weather. As a rule, the tenants continuously occupy the entire space at their command and on this account they are not infrequently obliged to walk the streets until the disinfection is completed. The time most available is during the middle of the day, and the rooms must be opened in time for the preparation of the evening meal. The great extent of the city, requiring the disinfectors to travel long distances, precludes any heavy or cumbersome apparatus, and the operators are not sufficiently skilled as mechanics to operate valves, thermometers and gauges with which many of the appliances tested are furnished. As all manner of articles are to be disinfected, including clothing, bedding and even kitchen utensils, the disinfecting agent must show reasonably destructive properties toward all

kinds of bacteria cultures exposed and especially toward the pathogenic varieties. Every known form of formaldehyd disinfectant has been tested during this period, including four using methyl alcohol, two using formochloral, one for the combustion of paraform pastils, and a number using formalin and special compounds. Without going into details at this time the statement may be made unqualifiedly that no apparatus or method thus far tested has fully or even fairly met the requirements essential for municipal disinfection, as above enumerated. Quite recently, however, a device for the vaporization of formalin, in an open vessel containing asbestos chips or fiber, was brought to the notice of the Commissioner, and the tests of this device, ordered by Dr. Reynolds and conducted under Dr. Gehrmann's supervision, have led to a still further simplification of the apparatus and more recently to the use of formalin diluted by the addition of three times its volume of water. The simplified apparatus consists of a shallow granite ware vessel, of half-gallon capacity, supported over a methyl-alcohol lamp, capable of holding twelve to sixteen ounces of the wood spirits. The asbestos has been found unnecessary, since it does not prevent the conversion of a larger percentage of the formic aldehyd into ineot paraform than when it is not used. Tollens and Mayer had already demonstrated that the polymerization of formic aldehyd does not take place with water at 100 C. when in dilute solution, and the results of Dr. Gehrmann's experiments on this line show that whatever amount of polymerized aldehyd may be formed during the concentration resulting from vaporization can be re-converted into the simple form by a further addition of boiling water. One pound of the formalin solution of 40 per cents strength contrains, approximately, 200 grams of formic aldehyd and, as from 30 to 50 drams are sufficient for the disinfection of 1000 cubic feet of space, one pound of the solution should be sufficient for the treatment of 4000 cubic feet, provided all the formaldehyd can be vaporized. In practice the experiments thus far conducted show that by diluting the ordinary solution with three times its volume of hot water and then boiling for half an hour, from 40 to 50 grams of the gas will be disengaged, quite sufficient to disinfect 1000 cubic feet. Whatever paraform is produced may be utilized for the next disinfection by the addition of boiling water, thus there is no waste. A six hours' exposure under these conditions has given better results in the sterilization of cultures than has been

obtained by any other method, and the other requirements, simplicity and portability of apparatus, rapid evolution of the disinfecting agent and brief duration of exposure, together with reasonable cost of disinfection, are also more nearly met. The results have, indeed, been so satisfactory and the remarkable bactericidal properties of formic aldehyd have received confirmation in such a practical manner through these experiments that, at the suggestion of the Assistant Commissioner, Dr. Reilly, an inexpensive vaporizer has been devised by Dr. Jaques, chief of the diphtheria corps, for use in the room occupied by diphtheria patient during the case. This vaporizer consists of a shallow cup supported over an ordinary cheap lamp, such as is made for coal-oil or kerosene. Methyl alcohol is used for the flame. The cup nearly filled with a solution consisting of about one part of 40 per cent. formalin and five parts of boiling water. The flame is so adjusted as to keep the solution just at the boiling point. The device in use costs less than twenty cents. This is furnished and used in all charity cases of diphtheria treated exclusively by the department, and is believed to be useful in limiting the danger of spread of the contagion to attendants and others, and to effect some degree of continuous disinfection of the room and its contents during the progress of the case.—*The Journal of the American Medical Association*.

Below is published in full the new quarantine law of this State. This law undoubtedly imposes additional powers on the State Board of Health, and will call for larger appropriations. It has not been the custom of the State Board of Health heretofore to take charge of smallpox until it had gotten beyond the control of the county officials. Now it is the duty of practicing physicians to report every case, not only of yellow fever, but smallpox and other contagious diseases to the Secretary of the State Board of Health. It then becomes the duty of the State Board of Health to take charge:

AN ACT to amend Section 3240 of the Annotated Code of Mississippi in reference to the time, place and manner of conducting examinations for license to practice medicine; and to amend Section 2279 of the Annotated Code of Mississippi in reference to the system of reporting and investigating contagious and infectious diseases in the State, and to enlarge the general powers of the State Board of Health as to quarantine and the enforcement thereof.

Section 1. Be it enacted by the Legislature of the State of Mississippi, That Section 3246 of the Annotated Code of Missis-

issippi be amended to read as follows: The State Board of Health shall meet at the capital twice in each year, at such time as may be designated by the board, for the purpose of examining applicants for license to practice medicine, and shall continue in session until all applicants are examined and the examinations are approved or disapproved. All examinations as to applicant's learning shall be upon written questions and answers, and distinction shall not be made between applicants because of the different systems or schools of practice that may be chosen.

Sec. 2. That Section 2279 of the Annotated Code of Mississippi be amended to read as follows: When yellow fever, cholera, dengue, smallpox, or other virulent epidemic contagious disease shall make its appearance in the State, the State Board of Health shall take charge of the infected district or locality, and enforce such rules and prescribe such measures as it may deem necessary to prevent the spread of disease or to suppress it. The presence of any two members of the executive committee of the State Board of Health shall constitute a quorum for the transaction of business, and all official meetings of the executive committee of the State Board of Health, as to time and place, shall be held pursuant to a call of the president of the State Board of Health.

Sec. 3. It shall be the duty of every practicing or licensed physician in the State of Mississippi to report immediately to the Secretary of the State Board of Health every case of yellow fever, cholera, dengue, smallpox or other virulent, epidemic, contagious disease that occurs within his practice.

Sec. 4. Any practicing or licensed physician of the State of Mississippi who shall willfully fail to report immediately to the Secretary of the State Board of Health any case of yellow fever, cholera, dengue, smallpox or other virulent, epidemic contagious disease that occurs within his practice shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished as provided by law for misdemeanors.

Sec. 5. Any person or persons who shall falsely and maliciously disseminate or spread rumors or reports concerning the existence of yellow fever, cholera, dengue, smallpox or other virulent epidemic contagious diseases in any portion of this State shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished as now provided by law for misdemeanors.

Sec. 6. It shall be the duty of the Secretary of the State Board of Health upon the receipt of information that there is any case of yellow fever, cholera, dengue, smallpox or other virulent, epidemic contagious diseases in any portion of this State, to order the proper county health officer or other competent physician to proceed immediately to said place, and to investigate the said reported case or cases of yellow fever, cholera, dengue, smallpox or other virulent, epidemic, contagious disease, and to report to the said Secretary of the State Board of

Health the results of his said investigation, and said Secretary of the State Board of Health shall at once declare any infected point to be in quarantine under a competent physician as State health officer, and shall notify the President of the State Board of Health, who shall, if practicable, call a meeting of the State Board of Health for the consideration of the same. Said State health officer shall have power, and it shall be his duty, in accordance with the quarantine regulations of the State Board of Health, to place any and all such restrictions upon ingress and egress at an infected point as may be necessary to prevent a spread of the disease from the infected locality, and to so control the population of said infected point, as to the disposition of the same, as shall best protect that population, and at the same time prevent a spread of the infection among the same.

Sec. 7. The Governor of the State, whenever called upon by the State Board of Health so to do, to provide the said State Board of Health with all the requisite means to enforce whatever quarantine regulations may be deemed necessary by said State Board of Health, including such armed forces from the National Guard or militia of the State, as may in the judgment of the Governor be required by said State Board of Health. But the National Guard and militia shall at all times be under the direction and command of the Governor.

Sec. 8. The State Board of Health shall have power, by and with the consent of the Governor of this State, when the occasion demands it, to call upon the general government for such financial and medical aid as the necessities arising out of any epidemic may require.

Sec. 9. The State Board of Health shall formulate and enact all quarantine regulations that pertain to the passenger and freight traffic of all railroads and common carriers that enter into or operate within the limits of the State of Mississippi; and the jurisdiction of the State Board of Health in such matters shall be paramount and exclusive; provided, that this shall only confer authority upon the State Board of Health to permit travel and commerce, to allow necessary stops at grade crossings, turn-tables, water tanks and coal chutes, and to pass persons or things through and beyond the lines of any quarantine maintained by any county or municipality in the State, and shall never confer authority upon said Board to lodge or stop, within the lines of any municipal or county quarantine, any person or thing excluded by such quarantine, except as to the investigation of any reported case or cases of yellow fever or other contagious or infectious disease, the putting in quarantine of any infected point and the establishment of relay and detention camps.

Sec. 10. That all acts and parts of acts in conflict with this act be and they are hereby repealed, and that this act take effect and be in force from and after its passage.

Approved February 10, 1898.

Abstracts and Extracts.

DR. NICHOLAS SENN, of Chicago, was lately taken to Galena, in care of a sheriff, to answer to the charge of contempt of court. As it turned out that his evidence was immaterial to the case, where he refused to appear, and as the judge found out he was a very busy man, having much more important duties than the neglected one pressing upon him, he was forgiven by the court.—*New York Medical Record*.

UTERINE INERTIA.—Dr. W. B. Dorsett has used phosphate of strychnine (grain 1-100, gradually increased to grain 1-25) with very satisfactory results during the gestation period of anemic and debilitated women. In addition to the local action upon the uterine musculature, it promotes assimilation, relieves constipation and prevents the often observed chilliness or rigors after labor. Under this treatment he has not found it necessary to employ ergot for the past five years in his obstetric practice.—*Denver Medical Times*.

HYPNOTISM BEFORE THE COURT.—In the supreme court of California, in the case of the People vs. Ebanks, the ruling of the Trial Judge in reference to the effects of hypnotism upon the defendant are interesting. The decision was reviewed by the supreme court of California. In this case a witness was called by the defendant who was charged with murder and an offer was made to prove by him that he was an expert hypnotist, that he had hypnotized the defendant and that when hypnotized the defendant had made a statement to him in regard to his knowledge of the affair, from which statement the witness was ready to testify that the defendant was not guilty and that defendant denied his guilt while in that condition. The Trial Judge sustained an objection to the testimony. He said: "The law in the United States does not recognize hypnotism. It would be an illegal defense and I cannot admit it." Commissioner Searles, who prepared the opinion of the supreme court of California, wherein it, Aug. 23, 1897, affirmed the judgment of conviction of murder in the first degree, said, "We shall not stop to argue the point, and

only add the court was right." Commissioners Belcher and Chipman concurred. Justice McFarland said: "I concur in the judgment and in the opinion of Commissioner Searles, but what is said in the opinion on the subject of hypnotism must be taken as applicable to the testimony offered on that subject in this case, which was clearly inadmissible, and not as covering the whole subject. It will not be necessary to determine whether or not testimony tending to show that a defendant committed the act charged while in a hynotic condition is admissible until a case involving that precise question shall be presented." In this utterance, Justices Henshaw and Van Fleet concurred.—*Medico-Legal Journal*.

Medical News and Miscellany.

FOR SALE IN MISSISSIPPI.—A two thousand dollar practice, seven room residence, all necessary outbuildings, a well of good water, 6 acres of land attached, in a growing railroad town with good church and school facilities. Address this office.

PAIN IN OTITIS.—Dr. George H. Powders, Professor of Ophthalmology and Otology in the University of California, San Francisco, in an article in *The Medical News*, writes as follows, in reference to the treatment of pain in otitis: "At my first visit I found a copious discharge of bloody serum from the ear with hardly a trace of pus. He suffered from severe cephalalgia, but there was no special tenderness in or about the ear, and no swelling. Thorough cleansing of the meatus with dry cotton relieved the pain in the head remarkably, and with a dose of anti-kamnia, 10 grains, he slept some hours."

Dr. A. M. Ritter of Milo, Ohio, January 29th, 1898, writes: I wish to speak especially of the merits of Papine, as an analgesic and sedative. I have had success with it when all other remedies of like character had failed. One case in particular of intestinal indigestion, in a child twelve months old, attended with a great amount of pain, and extreme nervousness, and insomnia. The remedy worked like a charm in relieving pain, and

giving rest. The remedy was given in five-drop doses to begin with, as required to give rest and relieve pain. Papine was used in this case for at least six months, in increasing doses, without doing the least harm. It has now been three months since Papine has been discontinued, and the child is in perfect health. I consider Papine one of our most valuable remedies as a pain reliever and nerve sedative in well-selected cases.

"* * * * Some manufacturers, like the Antikamnia Chemical Co. and the Imperial Granum Food Co., are making conscientious efforts to keep the people from buying their products except upon the advice of physicians, are rigidly excluding their advertising from the general public—and so deserve the hearty support and encouragement of the medical profession. Of some others, who are reaching out for the "dear public" as well as the "dear doctor," as much cannot be said. * * * *"—*American Journal of Surgery and Gynecology*, February, 1898.

Dr. John Darrington of Eden is now in New York City taking a special course in gynecology. When he returns he will locate in Yazoo City where he will establish a sanitarium. We wish him success in his new enterprise.

Dr. R. J. Turner, of Bay St. Louis, was a caller at the Record office a few days ago. Dr. Turner is health officer of Hancock county and is an able and fearless official. He has been handling the small pox in his county recently as efficiently as he did yellow fever in 1897.

Dr. O. L. Bailey, of Ocean Springs, was in Biloxi a few days ago. Dr. Bailey has been on the coast less than a year and within this short period has made a reputation in his profession that any man might well be proud of.

Remember the meeting of the Association, April the 20th. The members expecting to contribute papers are now sending titles of same to Dr. J. R. Tackett, secretary. He has already received several, indicating that the meeting will be an interesting one. He has also been notified of applications that will be made for membership.

The Journal

.....OF THE.....

Mississippi State Medical Association.

VOL. II.

MAY, 1898.

No. 2.

Original Articles.

Yellow Fever.*

By HARRIS A. GANT, M. D., WATER VALLEY, J. R. TACKETT, M. D.,
BILOXI, H. M. FOLKES, M. D., JACKSON.

An acute, self-limited infectious disease, of an apparently contagious nature usually spoken of as being of one paroxysm, but in a majority of cases presenting a noticeable rise after the first fever has subsided.

Etiology unknown. Claimed by Sanarelli as due to a bacillus discovered by himself. We believe, owing to its close clinical relationship to malaria—to which it may be called a twin brother—that it will ultimately be proven a spasmodic disease, probably as dependent upon animal decomposition as is malaria upon vegetable. We further believe that morbid material is taken in by the respiratory apparatus. All persons exposed to the fever will acquire it with very few exceptions. One attack immunizes in 98 per cent of cases. The so-called home is in tropical countries, notably, Cuba, San Domingo, Brazil, etc. From a close study of Havana, a place where it has daily existed for the past half century we are fully convinced that proper hygienic measures will result in its extermination in almost any country where it may exist.

It is not a native of any country where frost occurs and

*Extract from report of Cuban Commission made to the State Board of Health March, 1898.

never appears there unless imported. Modes of dissemination exist in many articles of daily use and are principally made up of household goods, as bedding, cloth or hair furniture, carpets, curtains, etc., wearing apparel, edibles, as coffee, sugar or tea in bags or sacks, canvass hats, etc., in fact, any material of soft or porous nature. We doubt that vegetables and fruits ever serve as fomites, but in absence of proof of their harmfulness we consider it advisable to interdict their shipment. It will be observed that infected points occur only along lines of travel or by direct communication. This is worthy of note in connection with its prevention by quarantine.

Concerning its spread by mail, we doubt that this ever occurs in letters, and, if properly fumigated, never. With papers or books freshly printed and subjected to infection before becoming dry, we believe there may exist a possible source of infection.

The period of incubation varies from 24 hours, the known shortest; to 14 days, the known longest, with an average of 3 days.

Racial or residential characteristics modifying the disease exists most markedly among negroes and people living in a warm or hot climate. As a rule negroes have the fever in mild form. In connection with this we call attention to the difficulty of diagnosis among these people.

Those coming from a colder clime are more susceptible to the fever and show a higher mortality than the local people among whom the disease first appears. The dreadful mortality of the Philadelphia epidemic, many years ago, shows how much more readily people of a cold country yield to the ravages of the fever.

Foreigners after living several years in a yellow fever country, as Cuba, or Hayti, may have the fever in its mild form, called acclimating fever. This should be remembered, as it accounts for mild cases in epidemic years among those not thoroughly acclimated. Coexistent epidemics are rare, but cholera has been seen in Havana at the same time with yellow fever and known to have disappeared during the months when yellow fever most prevailed. In connection with this point we wish to strongly impress the fact that malaria plasmodia found in the blood of a suspicious case does not preclude the co-existence of yellow fever and refer to each of them as it must be remembered

that while it is easy to diagnose a typical case, these rarely occur at the beginning of an epidemic, and while waiting for pronounced symptoms the disease has time to become widespread.

First: Onset usually at night. This is doubtless due to the lowered vitality at night, and this following a heavy meal before retiring precipitates the attack. Sometimes, though, it makes its appearance during the day.

Second: Chill occurs in 90 per cent. of the cases; sometimes pronounced, at other times only a slight chilliness, so light as not to be noticed.

Third: Temperature, in vast majority of cases, is at its height at cessation of the chill, but this is not always so, as it sometimes begins to rise and only reaches its maximum 10 or 12 hours after the onset. As a general thing the temperature does not range high, not often being over 104 degrees, though sometimes having been seen as high as 107 degrees. It usually ranges at 103 or 103½ degrees.

The fever begins to abate from the beginning usually and from 12 to 72 hours the patient is usually free of fever, though many cases will show about a half degree of temperature, or perhaps the same amount sub-normal during the stage of calm so-called, which lasts from 12 to 48 hours, and is then in a majority of cases followed by a fever of remittent type, lasting commonly 4 or 5 days. This is a typical case of yellow fever; but it happens very often that the patient becomes secondarily infected, or in other words a subject of avto-intoxication and then drops into a typhoid condition which may last anywhere from 20 to 90 days. This is the condition which the older physicians referred to as running into typhoid fever, but whose pathology we are now better acquainted with and know for a septic poisoning. In connection with this class of cases, attention is called to those patients having abscesses after being sick for so long a time. This may be due to a true streptococcus or staphylococcus infection ingrafted upon the septic condition already engendered by yellow fever.

Malaria as a substratum of life in the South must be remembered and treated to a certain extent in the cases of long continued fever.

In convalescence we see the temperature nearly always below normal to the extent of one degree or one and a half degree, this condition exists for a week or ten days, being most pro-

nounced on rising in the morning.

Fourth: Pulse is a factor which must be closely observed. At the onset of the attack it is fast and in proportion to the fever. It occasionally happens that as early as 36 hours after the beginning of the fever, it will begin to slow down and lose its ratio to the temperature, but as a rule it is in the second rise of the fever where we see it steadily slowing or remaining stationary, while the temperature rises or remains normal. The pulse sometimes drops as low as 36 to the minute, but 56 is the average, which continues during the remittent state and on into convalescence for many days, when it begins to slowly rise until it reaches the normal. This slowness of the pulse is due to the thickening of the blood by changes which will be mentioned later. The tone of the pulse throughout is markedly gaseous.

Fifth: The facial expression of a yellow fever patient is worthy of close and careful study. At first the face is flushed, eyes bright, expression quick and restless, this later is merged into a look of worry, anxiety and dread, giving them a haggard expression. At times the face is remarkable for its dull apathetic appearance.

Sixth: The eyes are at first bright, watery, glistening with a kind of fleety, wavy movement. Sclerotic congestion soon follows to which is quickly added an icteroid tinge soonest and best observed by lifting the lids. This can be found as early as 10 or 12 hours after the onset. The congested condition remains a marked feature on through convalescence. The eye lashes are frequently matted, and this like the congestion lingers long.

Seventh: Epistaxis is a frequent and at times a dangerous symptom.

Eighth: The skin is a factor of great moment in the treatment of yellow fever and as such, deserves careful attention and observation. At the onset usually, except in fulminating cases, showing a tendency to act nicely, this will continue if proper care be exercised. Diaphoresis continues; and during the fever, through the stage of convalescence and during the remittent period is a frequent accompaniment of convalescence and in children must be closely observed at night when at times it may become so excessive as to prostrate the little patient.

The skin as a general thing, though in many cases it does not, assumes a yellowish color, most noticeable in the scalp and lips, and best brought out by pressure upon the parts to be ob-

served. Some cases, only the serious ones, however, become extremely yellow, deepening into a bronze. It is also in this class of cases that ecchymotic spots most frequently make their appearance, especially noticeable in the dependent parts of the body, as back of neck, shoulders and calves.

Not more than 20 per cent of those cases seen by us in Havana had a decided yellow color. In patients kept in a close room or under many blankets there is to be found a distinct and characteristic odor, differing from the smell of malarial, or any other fever, and being almost indescribable as to its exact nature, though its closest resemblance is to be found in a bed of young mice.

Ninth: Pain is one of the most pronounced symptoms. It occurs in the head, usually in the region of the temples, sometimes on the sides and top, is very severe and causes patients much suffering.

Pain in the lumbar region is an unfailing accompaniment and during the first two or three days causes the patient more trouble, perhaps, than any other symptom. The pain in the calves of the legs and thighs are severe but endurable, and are almost unfailing symptoms.

Headache during convalescence is a feature so striking as to almost be pathognomonic. A sense of constriction around the body at edge of ribs a sometime symptom and while not exactly a pain should be classed with it.

In connection with this also attention is called to a sense of oppression at times approaching dyspnea, which is marked in some cases at the height of the fever.

Tenth: The tongue is usually clean at first, but in a few hours becomes coated, red on edge and tip, slightly pointed, sometimes broad and thick and never a malarial tongue, though at times indentations are observed, but when this happens it may be safely counted a mixed infection.

The coat is at times so thick as to feel like cotton. When it clears up it usually does so in patches. There is a waviness or tremulousness about it which is characteristic.

Beneath the tongue there is, as a rule, a marked congestion of the vessels. It sometimes bleeds, hemorrhage usually coming from the edges.

Eleventh: Gums soon become congested, swollen, spongy,

and bleed on pressure. They present an appearance strikingly simulating ptyalism.

Twelfth: Mouth is frequently sore after a few days' illness and along edges of teeth becomes very much indurated and swollen. The breath in these cases is quite offensive. After a long continued illness when the patient has lapsed into a typhoid state, the breath is extremely fetid, reminding one strongly of the odor of a confinement.

Thirteenth: The stomach is sore and tender. Frequently the patient is nauseated at onset of fever and the first vomit consists of undigested food, if there be any in the stomach. If there be none then it is a thick, glairy mucous. Should there be a malarial element in the patient there is likely to be a vomiting of bile also. Black vomit will be mentioned under the head of complications.

Fourteenth: Tenderness over bowels which are at times are disturbed, but as a rule there is no tympanites. Obstinate constipation is the rule, due to a paresis of smooth muscular fibres. The stools when the bowels do move are black or greyish black in color.

Fifteenth: The kidneys will show in many instances a tendency toward suppression.

Sixteenth: Urine usually scanty, high colored, in nearly all cases albuminous, anywhere from traces to 75 per cent.

A marked feature is the fact that with low temperatures, there is to be found in many cases, only the faintest trace of albumen, and then only by the closest search: in some cases will contain blood, rarely, however. Phosphates and mucous have been found in cases who have had old cystic troubles, and should be remembered, as also should cases of gonorrhoea which may exist unsuspected.

Retention is a sometime feature which should be borne in mind and is liable to occur among all classes and ages of patients.

Seventeenth: Appetite is of no moment at first onset of the disease, but is a gnawing pain during the stage of calm. The appetite of convalescence is great and must be closely guarded. Thirst not marked as a rule.

Eighteenth: Insomnia during the first few nights is a spectre which haunts the poor sufferer and renders his nights a perfect horror. This, however, is due in a large measure to the

pain in the back and head, and since we have found means to control this we will in a large measure have the sleeplessness under control.

Nineteenth: Restlessness is such a pronounced feature and symptom as to call forth the closest watchfulness on the part of the nurse, as the patient tosses from side to side and is utterly incapable of containing himself, evincing an inclination to pull the cover up about his neck and shoulders.

Twentieth: The nervous system is usually profoundly depressed.

Twenty-first: Hemorrhage from uterus is a frequent symptom in women, especially among young girls about puberty; who nearly always make bad cases.

Twenty-second: Yellow fever complications will be classed under one head, as presenting features which, while characteristic of the disease are not always to be insisted upon before making a diagnosis.

One of the most frequent is black vomit, so called from its usual dark wine colored appearance with little particles resembling dirty dish water. This has been in the past a most dreaded symptom and one which has been guilty of causing a great deal of confusion in the layman's mind as to its being a sure sign of death; though, such is not the case, many living men can personally testify. The records prove that about forty per cent of those having this symptom died under the old treatment and not more than twenty-five per cent under the new. A distinctive feature of this vomit is its projectile character.

Suppression of urine, is, without doubt the gravest complication met with in yellow fever. Nearly 88 per cent of those having it die. Let us remember that retention is not suppression, and every case should be closely examined to make the distinction which should be easy, as retention is usually an early symptom and the patient does not present that appearance of grave illness which is so prominent in suppression.

Inflammation of parotid sub maxillary glands is rather a frequent sequela of the fever in children especially.

Convulsions occur, though rarely, due mostly to high temperature but at times dependent upon the poison in the blood, or the gastric disturbances.

Cessation of diaphoresis sometimes occurs, and as it throws

more work on an already overburdened kidney it must be promptly met.

Septic conditions have been referred to under the head of temperature and need only be mentioned to be kept in mind as a sometimes feature.

Under this heading will also be mentioned sub acute or typical cases which occur during epidemics. These cases will start out with a pronounced pain in some region of the body, or else have a continuous attack of almost uncontrollable vomiting.

Though the temperature rarely exceeds $99\frac{1}{2}$ degrees, it sometime does not rise until the other symptoms have been under observation for two or three days, the pulse slows down to 60 perhaps, the eyes are injected the bowels are constipated, the urine contains faint traces of albumen and the stools are characteristically black.

A sore mouth and swollen gums frequently add to the other features of the disease.

The occurrence of these cases among immunes shows the influence of the poison.

DIAGNOSTIC FINDINGS OF A YELLOW FEVER POST MORTEM.

Skin markedly icteric sclerotics very much so, usually early ecchymotic spots on back of neck, shoulders and lumbar regions thighs, calves of legs and ears.

Abdomen usually dry, sometimes a little fluid present, liver contracted away from the ribs, box-wood color, bloodless and friable. Gall-bladder contracted, usually empty sometimes containing a thick tarry fluid. Spleen normal in size and color. Kidneys normal sometimes showing signs of recent acute.

Stomach usually anemic generally showing exfoliated spots where hemorrhages have occurred and frequently containing black vomit.

The intestines generally contain a pasty bismuth colored material like the stools, only not so black. The mucous membrane of the whole alimentary track shows the most decided effects of the poison and demonstrates beyond a doubt the most degenerate effects of the disease, presenting congestions and erosions and frequently hemorrhagic spots, especially in the duodenum.

The heart often shows traces of fatty degeneration.

TREATMENT.

A sober, intelligent, honest, wideawake nurse. One who

will take some interest in the case and further your every effort, looking to recovery of the patient.

Very little medicine, mostly management. A household or bulb syringe.

Should the patient be taken before complete digestion of a heavy meal empty stomach either by hot soda water in large quantities or preferably by stomach syphon.

Give ten grains each of calomel and soda, divided into two doses to be given three hours apart, followed by an enema or saline cathartic in six or eight hours, if necessary. Put patient to bed, give a hot mustard foot bath, cover with one blanket next to body. At night put on enough cover to keep patient from becoming chilled. If in pain or temperature too high, give one five grain dose phenacitine, antikamnia or acetanalide and repeat once or twice if necessary. If expecting a malarial substratum give 20 grains of quinine in solution. If patient reject it, give another dose at once. Keep the patient in a gentle perspiration by warm drinks of orange leaf tea, or some such agreeable drink as flax-seed tea, etc.

The use of Stafford mineral water from the start will prove of great service in combatting a possible tendency toward suppression.

The insomnia, being largely due to the back pain, can be much relieved by the following—

℞.—Oleum Sinapis Nig.....m 10
 Chloroformi.....m 60
 Mentholi.....gr 20
 Extract Hamamelis vir,
 Sps. Veni Recti aa qs.....ozi
 M.—S.—Rub back well.

This is of striking benefit and will usually put the patient to sleep in a short while. A couple of 10 grain doses of Trional or Sulphonal in hot milk at intervals of one hour will prove very efficacious also. As a stimulant, Elixir Ducros, in 2 tablespoonful doses with a like amount of water, every two or three hours is much used by the laity. Dietary: Liquid absolutely. During first stage of fever and the calm state, it is best to give little or nothing except water, as needed, two tablespoonful or more every half hour. Corn meal gruel, strained thin, chicken soup or broth, oat meal gruel, are the most valuable food stuffs we possess. Fresh buttermilk in small quantities may also be used. In using

these diets care must be exercised not to overload the stomach, being safest to give small quantities at frequent intervals. There is more to be feared from eating than from nearly all other causes put together.

TREATMENT OF COMPLICATIONS.

Black vomit is best treated by being prevented. This can be accomplished by keeping the stomach at rest as nearly as possible. Should black vomit supervene a large mustard plaster must be placed upon the epigastric region and from $\frac{1}{4}$ to $\frac{1}{2}$ grain hydrachlorate of cocaine should be placed on back part of tongue and with a little water washed at once into the stomach. These measures rarely fail. One-half minim doses of creosote, pushed to the point of burning the fauces is also a valuable remedy. Three to five or even ten grain doses of calomel, floated on champagne, has proved efficacious. Ice-cold compresses, applied to the throat have proven serviceable in controlling nausea.

Suppression of urine is a symptom demanding urgent work. Have a big mustard plaster made at once to apply to loins, while this is being made ready, give a copious enema of hot water, thus cleaning out the system and relieving congestion.

Give 10 minim doses of oil of turpentine on lump of sugar every 30 minutes until 60 minims are given.

Apply hot applications to entire surface of body. Green coffee tea made by putting a pint of boiling water upon two tablespoonsful of green coffee and letting it steep is a powerful remedy.

Epistaxis if excessive can be controlled by plugging, or by spraying with a 33 $\frac{1}{3}$ per cent. of Monsels Solution.

The checking of perspiration sometimes demands attention, and is best met by hot drinks and hot applications to body. The slow pulse and possible cardiac weakness are best treated by the use of strychnine Sulphate or Tr. Nucis vomica. In giving rectal injections, remember that normal salt solution is not near so irritating as is plain water.

Should convulsions supervene, direct urgent measures to all the emunctories. Patient should be placed in hot water, at once, if relief is not obtained by this and small doses of bromides.

Insomnia and restlessness are often relieved by sponging with equal parts of hot water and alcohol.

In extremely high temperatures when other measures fail ice poultices or sponging with ice water may be resorted to.

Of all measures at our command the enema is, without doubt, the most efficacious in yellow fever.

Mississippi State Medical Association.

Proceedings of the Thirty-First Annual Session, Held in Representative Hall, Jackson, Miss., April 20-22, 1898.

MORNING SESSION.

JACKSON, MISS., Wednesday, April 20, 1898.

The members of the Mississippi State Medical Association met in Representative hall, in this city, at 12 o'clock m., April 20, 1898.

Dr. W. M. Paine, of Aberdeen, occupied the chair and called the meeting to order.

Rev. Dr. DuBose, of Jackson, in an eloquent manner, invoked Divine blessing.

The secretary called the roll and the following members answered to their names:

M. J. Alexander, T. T. Bonner, J. M. Buchanan, J. T. B. Berry, D. B. Crawley, E. C. Coleman, J. A. Crisler, B. L. Cully, H. Christmas, H. L. Crook, B. F. Duke, S. R. Dunn, H. M. Folkes, H. A. Gant, H. S. Gully, A. C. Halbert, J. F. Hunter, H. H. Haralson, H. H. Harrison, J. H. Harrison, W. A. Johns, C. Kendrick, W. G. Kiger, S. A. Majure, C. M. Murry, T. J. Mitchell, H. A. Minor, C. D. Mitchell, S. H. McLean, V. M. Neal, W. M. Paine, E. B. Pool, G. C. Phillips, O. B. Quinn, W. W. Robertson, J. H. Rhodes, L. A. Murdock, R. W. Rowland, H. N. Street, G. W. Trimble, W. E. Todd, Geo. A. Teunison, J. R. Tackett, Jno. Tackett, Nolan Stewart, B. A. Shepherd, S. M. Watson.

On motion, Association adjourned to meet at 2:30 o'clock.

AFTERNOON SESSION—2:30 P. M.

Meeting called to order by Dr. Paine, President.

First order of business was the report of Arrangement Com-

mittee

Dr. J. F. Hunter, Treasurer, read his report and it was referred to the proper committee:

J. F. Hunter, Treas., in account with Mississippi State Medical Association: 1897.

Apr. 23—Jno. Elesassu, making stand.....	\$ 1 50
23—Jackson Bank, joint note Hunter, Kiger, et al	355 00
24—Evening News, printing programs.....	3 50
24—Jas. Taylor, janitor, ice, etc.....	8 30
26—Clarion-Ledger, printing.....	2 50
29—J. R. Tackett, expense as Secretary.....	19 00
May 5—Enoch Lumber Co., making stand.....	1 41
June 11—H. H. Haralson, printing transaction.....	100 00
	<hr/>
	\$491 21

1897.

Apr. 20—By balance	\$148 20
25—By cash	311 00
May 22—By cash	10 60
July 14—By cash	5 00

1898.

May 26—By cash	14 00
Balance due Treasurer.....	2 41
	<hr/>
	\$491 21

Dr. C. H. Trotter, Assistant Secretary, read his report and same was referred to proper committee:

To Mississippi State Medical Association, Jackson, Miss.:

Gentlemen: I beg leave to make the following report:

I was elected Assistant Secretary of the Association at its April meeting, 1895, and collected during the year, \$145.

I was not able to get to the meeting in Vicksburg, 1896, and did not get my books back until our April meeting, 1897, but find from the stubs that the amount collected was \$258.

Amount collected by me at our April meeting, 1897, \$311.

Amount collected since, \$34.

I have credited on books that was collected by Dr. Hunter amount of \$51.

Summary of amount collected by me since elected	\$490 00
May 22, 1895—Paid Dr. Hunter.....	\$42 00
June 26, 1895—Paid Dr. Hunter	12 00
Aug. 7, 1895—Paid Dr. Hunter	18 00
Dec. 14, 1895—Stamps to date	8 60
Dec. 17, 1895—Paid Dr. Hunter.....	47 00
April 1, 1896—Stationery and stamps.....	2 75
April 22, 1897—Paid Dr. Hunter	311 00
March—1898—Paid Dr. Hunter.....	14 00
April 1, 1898—Stamps since last meeting	11 34
April 1, 1898—Stationery since last meeting	3 25
Balance due Association	<hr/>
	20 06
	<hr/>
	\$490 00

Dr. J. R. Tackett, Secretary, read his report and same was referred to proper committee.

On motion, Association adjourned for fifteen minutes and until the Nominating Committee could make their report.

The election of the Nominating Committee resulted as follows:

First District—W. A. Johns, Corinth.

Second District—W. S. Weissinger, Hernando.

Third District—J. N. D. Shinkle, Friar's Point.

Fourth District—H. A. Gant, Water Valley.

Fifth District—H. Christmas, Tchula.

Sixth District—H. N. Street, Gloster.

Seventh District—R. E. Jones, Crystal Springs.

The Executive Committee made their report and the following new members were admitted:

J. W. McCarley, Ripley, Tippah county; J. W. Thomason, Arkabutla, Tate county; E. M. Murphy, Macon, Noxubee county; R. L. Hagaman, Centreville, Wilkinson county; T. B. Cox, Learned, Hinds county; J. P. Synnott, Lodi, Montgomery county; L. W. Magruder, Woodville, Wilkerson county; W. J. Nelson, Tunica, Tunica county; W. H. Bell, Nolen, Yallobusha county; Montgomery C. Ellis, Senatobia, Tate county; G. S. Ellis, Helena, Ark.; W. A. Carnes, Kosciusko, Attala county; A. A. Young, Oxford, Lafayette county; E. J. Johnson, Eden, Yazoo county; J. W. Comfort, Sallis, Attala county.

The President then convened the Association and the Nominating Committee were instructed.

The following members constitute the Nominating Committee: Drs. W. A. Johns, W. S. Weissinger, J. D. N. Shinkle, H. A. Gant, H. Christmas, H. N. Street, R. E. Jones.

The following members have arrived since the morning session: R. E. Jones, C. H. Trotter, J. C. Ballard, F. H. Galledge, T. W. Foster, W. T. Bolton, J. W. Young, J. M. Catchings, J. A. Rowan, T. R. Trotter, W. P. Gatlin, J. M. Shelby, M. W. Hamilton, L. T. Fox, F. D. Priddy, D. S. Humphreys, N. E. Whitehead, S. L. Brister.

A letter from Dr. A. L. Gibon, New York, asking a contribution for the Rush monument, was laid on the table.

Moved and seconded that the Association pay the Secretary fifty dollars per annum for the three years he has served the As-

sociation: and twenty five dollars, each, to the Treasurer and Assistant Secretary, per annum, for the past three years.

The regular order of business being completed, the Association took up the reading of papers.

J. C. Ballard, of Natchez, read the first paper on "The Treatment of Malarial Fever." Discussed by M. J. Alexander, H. Christums, Henry Posert, W. E. Todd, G. C. Phillips, A. C. Hallbert, H. M. Folkes. Paper closed by Dr. Ballard and same received with thanks and referred to Publication Committee.

On motion of Dr. Kiger, the regular order of business was suspended, and the report of the committee on the Mississippi Department of Public Health was introduced by Dr. W. G. Kiger, chairman.

On motion, the report was postponed until the night session, in order that the members might have a better opportunity of discussing and considering same.

On motion of Dr. Quinn a vote was taken to submit the bill to some legal adviser to ascertain if the adoption of the bill would destroy the name, etc., of the Mississippi State Medical Association, and a committee of three was appointed to see some legal adviser as follows: Drs. Rowland, Quinn and Minor.

On motion, Association adjourned to meet at 8:30 o'clock.

NIGHT SESSION.

Meeting called to order, Dr. Paine, President, in the chair.

The President then introduced Hon. Ramsey Wharton, Mayor of Jackson, who welcomed the Association to Jackson in a short and eloquent address.

Dr. Chas. D. Mitchell, of Pontotoc, was then presented by the President and in most happy and graceful language replied in behalf of the Association to the Address of Welcome.

Dr. W. M. Paine, of Aberdeen, then delivered the President's Address, which was a strong and able paper on "Puerperal Echinopsia."

GENTLEMEN—There are occasions in the experience of us all when the presence and encouragement of our friends are particularly grateful. For more than fifteen years I have been a member of this Association. I have met with you, have participated in your deliberations and profited by the mutual contact. During those years I have learned to know and esteem the personnel of this Association and the work it is accomplishing for

the profession and the best interest of our State. Profoundly conscious of these things, and of my own unworthiness, I feel that I can hardly express to you my appreciation of the honor you have conferred upon me.

The past year has been one of toil and constant drudgery for most of us, while to others of our number it has been one of greater responsibility and personal risks. The heated term found many of us penned up in fever stricken towns battling against that most dreaded foe of our Southern States.

How the disease was introduced into our State and allowed to gain a foot-hold, I shall not attempt to say, and I doubt not that others more competent than I will discuss this matter for you. But one thing I will say, when the presence of this dreaded destroyer was announced, and it was known that its march had begun, striking terror into the hearts of those who looked to us for counsel in time of peril, then, like true soldiers, the profession of this State resolved themselves into a home guard and manfully did they give battle. To your zeal and to the untiring efforts of our State Board of Health, is due the fact that we were not devastated in truth.

The disease was met and fought as never before and every inch of ground was stubbornly contested. The exercise of a rigid quarantine confined the disease to a very few communities and modern methods of treatment reduced the mortality to an unprecedented low average. And yet the harm such an epidemic can work for a State or community is fearful and far reaching in its effect. In some instances whole families were swept away, communities terror stricken and commerce wholly paralyzed. These are familiar features of such an epidemic. Capital is proverbially timid and fearful of risk, and the paralysis of trade consequent to a rigid quarantine is enough to inspire investors with distrust of our climate and our ability to afford adequate protection. Just so long as Mississippi is visited by wide spread epidemics, just so long will our industries and economic development be delayed. And yet the guarantee of just immunity from such disaster is a difficult matter and one that is worthy to engage our best talent and endeavor.

That this matter may be fully discussed at this meeting, and that definite conclusions may be reached is devoutly to be wished.

The good work of our board of examiners is a matter of

pride to all of us. Every day you can see the advantages accruing from a rigid system of examination in the shape of a well trained, intelligent body of young men who are taking their places in our ranks.

The post-graduate and leading hospitals at our large centers are filled with young men from Mississippi striving for what is best and newest in the science of medicine.

That such a condition of affairs argues well for the best interest of our profession, goes without question.

And yet I give it as my personal opinion that a gradual tightening of restriction and elevation of standard would redound to our professional gain. The work of our Association ought to claim the earnest support and best effort of us all.

Hereby the mutual contact of mind must be our chief means of professional growth. In a discussion of matters medical and the inevitable rubbing off process is our best school for keeping our minds bright and active, ready to profit by whatever has been found best to protect human life. It then becomes the duty of every one who has the best interest of his profession at heart to connect himself with some medical association, that he may profit by the experience of others and they by what he has found best for the alleviation of suffering. This latter is in truth our life work, that for which we strive and in which we shall find our reward.

“For how glorious is our aim to ease the laboring heart,
To war with death and stop his flying dart,
To trace the source whence the fierce conflict grew,
And life's short lease on easier terms renew.”

On the various departments of medicine, probably the most important to the general practitioner is that of Obstetrics. In addition to this there is hardly a branch in which are to be found so many obsolete means of treatment, and such hesitation in accepting the results of modern research by the profession at large as in the practice of mid-wifery. Now that the teachings of Semmelweis and of Garriues in this country have shown that cleanliness will compass the safety of the mother because of the vast majority of obstetrical cases will come to a successful termination with very little treatment at all. The subject of obstetrical emergencies has not received adequate study at our hands. Because of the comparative infrequency of some of the complications there are today in our community physicians who, from lack of

preparation, are completely at sea when called to a case of disto-
cia or of eclampsia.

And yet there is nothing which so advances a physician's reputation as a thorough knowledge of obstetrics. A woman may forgive an error of diagnosis in an ordinary case of illness, or be disposed to make light of it, but let a mistake be made in the treatment of our obstetrical cases and the knowledge of that fact very soon becomes common property among the mothers of a community.

On the other hand successful management of a difficult case brings credit prompt and full. Among the emergencies and complications which are liable to be met with in obstetrical work, there is none of greater importance and gravity than curious condition known as "Puerperal eclampsia."

Insidious in march, fearful to look upon in convulsions, supervene and alarming to every one concerned, it is also characterized by large mortality, both foetal and maternal.

Its mortality has been variously estimated, but most conservatives put it down at twenty-five to thirty per cent. for the mother and about forty to sixty for the child. These figures will convey to the mind of thinking men the importance of this subject.

The etiology of eclampsia has been sought by the brightest minds in the profession; elaborate statistics have been compiled, long and bitter debates to its causation have occurred between the supporters of opposing theories. But so far the results of investigation are contradictory. To tabulate the various theories which have been advanced and discuss them, even briefly, would extend beyond the limits of this paper. It must suffice to review briefly the most important of the theories. In the first place we may mention that for a long time pressure was believed to be an important fact in its causation. This belief has a few adherents even at the present time, but as I believe now almost discarded by the profession at large. Why one woman in whom the ordinary systems due to pressure are prominent should escape it, while in another in whom such symptoms are present in no degree should have a violent attack of eclampsia is past comprehension.

That the trouble is due to Bright's disease, to a functional or organic lesion of the kidneys, solely and wholly as is claimed by some, is also without foundation. The pathological findings

in the kidneys are not uniform in all cases. In some cases the kidneys show no morbid change whatever. Some cases even are marked by an entire absence of albumen in the urine, simply a reduction in amount of urea excreted and nothing more. Then, too, in some of these cases patients after a violent attack of eclampsia may have a perfect recovery and never have albumen in the urine afterwards and no subsequent kidney lesion.

The line upon which most of the pathologists are working today is that of its being a toxæmia, intestinal or biliary, or both. I wish it were possible in the present state of our knowledge to define the toxins and trace them to their source, but it is not possible. We know there are poisons formed probably in the alimentary canal, and that deficient eliminations from the tissues of these poisons, either by the intestines, kidneys or skin, or all of them, will suffice to induce toxæmia, and that form of it peculiar to pregnant woman, puerperal eclampsia. This we believe to be the chief cause of eclampsia, but as yet the exact nature of these toxins of the laws governing normal elimination and a variation that give rise to grave systemic poisoning are in the dark. However, that this theory is correct is borne out by the results obtained by what is known as the eliminative treatment. This latter is a modern treatment of eclampsia, and has given results far in advance of all other methods of treatment. That there is a nervous element involved in the causation is also assumed to be the case. That eclampsia is much more apt to occur in primipiar who are dreading the ordeal of confinement and in the unmarried is a matter of common observation. The pathology of this condition is scant and unsatisfactory. Some slight evidence of congestion of the kidneys, sometimes but rarely a true nephritis, and occasionally a perfectly healthy kidney, are the usual findings postmortem. Neither of these conditions predominate sufficiently often to throw any light on the causation. The diagnosis of these conditions on which eclampsia depends and of the convulsions themselves involve little difficulty to a careful observer. In case an examination of a pregnant woman's urine is made every two weeks the observer may first notice a small amount of albumen in the urine. On close examination some slight swelling of the feet and ankles, probably a slight puffiness of the lower lids and a bruised appearance over the malar prominences will attract attention.

Some slight derangement of digestion, scanty urine, frontal

headache, worse at night, and a general feeling of distress will manifest themselves. In some cases the first symptom is announced by the patients themselves. A certain amount of dimness of vision, amounting occasionally to almost total blindness. Others complain particularly of flashes of light before the eye and this latter I may say is almost a constant symptom. These are the premonitory symptoms in the vast majority of all cases, but not in all. Sometimes they may all be absent and the convulsions first announce the disease. These convulsions, occurring as they do suddenly, are extremely alarming to the friends of the patient. The patient may be up and about, attending to her household duties, or engaged in conversation, when the onset comes. The muscles of the face may be the first to contract, drawing the mouth to one side and oft times distorting the features into a hideous grin. The jaws are forcibly closed, sometimes badly lacerating the tongue. The various muscles of the trunk and extremities are convulsed, the head drawn back, the respiratory muscles fixed and the extremities and facial muscle twitching. After a lapse of from fifteen to forty seconds relaxation ensues, the breathing becomes stertorous and the lips covered with bloody foam. The patient passes into a condition of stupor from which it may be at first impossible to arouse her. The patient may regain consciousness or as the convulsions succeed each other a stupor may deepen coma and death takes place. Such in brief is a general picture of this condition.

These convulsions may occur at any time during pregnancy after the fourth month, rarely before that time. They may occur just before, during or just after labor. Just as soon as the diagnosis is made, just then should treatment commence, and I may say right here that in the treatment of this condition the matter of prevention is paramount.

In the first place the urine of every pregnant woman whose case is intrusted to our care should be examined every two weeks. These examinations consume but very little of our time, are fully justified by the results obtained and afford a pregnant woman the satisfaction of knowing that every safeguard is being thrown around her at this most trying period of her life.

Just as soon as the premonitory symptoms manifest themselves, or we are able to detect any albumen in the urine or a marked diminution in the amount of urea, it is our duty to com-

mence efforts for relief. Time and again I have seen these efforts successful and the patient proceed to normal labor.

In the first place, remembering that the disease is a toxæmia and that elimination is either relative or absolutely deficient, we should use every means to increase elimination.

Depletion of the bowels by prepurgation either by drastic cathartic or by salines. A moderate effect in these drugs can be kept up for weeks with great benefit. Have the patient put to bed and daily warm bath given, or what is better the hot pack, and by these means secure free action of the skin. Direct that plenty of pure fresh water be taken as the best diuretic at our command. Relieve any local source of irritation that may through sympathy be apt to precipitate an attack of convulsions. All these are essential; especial stress being laid on elimination by the skin and intestinal tract. If the patient can be kept at rest and can be made to have two or three watery stools every day for a week or several weeks, the severity of the symptoms will begin to abate. This will be shown by an increase of urea and active disappearance of albumen from the urine, a subsidence of the swelling and a cessation of the headache.

Care must be exercised just here that our vigilance be not relaxed for the conditions are liable to occur at any time. As to the treatment of the disease in the presence of the convulsion it must be acknowledged that heroic measures are necessary in view of the frequent serious consequences of mother and child. It sometimes happens that the physician is not called in to see the case until convulsions have taken place; he is then confronted by a condition which requires all of his resources to prevent disaster.

A full list of all the drugs which have found a place in the treatment of eclampsia would extend this paper far beyond its rightful limit and it must suffice to mention only those which have received endorsements of our best men.

The most frequently used drug perhaps is morphine. It can be given very quickly by a hyperdermic injection, and will in most cases control the convulsion until labor supervenes or is induced. The hydrate of chloral has also many advocates and that it will sometimes control the convulsions there is no doubt. It has been given in thirty grain doses, preferably by an enema repeated often enough to control the convulsion; chloral, however, is falling into disuse owing to the slowness and uncertainty

of its action. However, in cases where time is not so precious it may be used, care being exercised that the mother does not get enough of the drug to compromise the safety of the child. Long and sometimes bitterly has the battle raged over the employment of *veratrum viridi* in this condition. Many years ago it was extensively used until the modern surgical means of treatment displaced it. However, its use has been revived of late, and many cases of apparent cure by means of this agent has been reported. The best preparation to use is that of Squibb and it may be given in ten minimis doses by the mouth or hyperdermically every two hours until the pulse is brought down to about sixty and is soft and compressible. This is an unreliable one though and is open to the same objection as chloral, slowness of action and hardly to be depended upon in crises where the lives of both mother and child are jeopardized. The best men of our time are inclined to reject it; among them such men as Potter of Buffalo, Nann Charptier, Tarnier Morrison and others whose experience in these cases are enormous. These men deem it unworthy the place it holds and regard it as too slow and uncertain. The practice of bleeding for this condition also has many advocates, but this method has fallen into disrepute along with venesection in general.

The same ends obtained by the bleeding normally occurring with delivery.

The use of purgatives has already been alluded to in speaking of the treatment before convulsions have occurred, and need not be discussed here except to say that hereto purgation fulfills one of the main indications, elimination of as much poison as possible. Purgation should be secured either by a drop of croton oil on the tongue or by saline in large doses.

Sometimes the convulsions cannot be controlled except by inhalation of chloroform, but this powerful means of arresting them should be used with great circumspection.

In fact it is better, if chloroform is necessary, to go on a step further and empty the uterus under anæsthesia.

The induction of labor after the seventh month or spontaneous labor coming on after that time is in the vast majority of cases followed by cessation of the fits. This means of relief has become almost a routine in the practice by nearly all of the leading obstetricians. Modern methods and employment of rigid asepsis have met and answered objection once urged against in

duction of labor for the relief of this condition. In some cases it is true that the convulsions do not cease after delivery, and these cases are assumed to be those in which the system is overwhelmed by the poison: no treatment is of avail in such cases and they usually terminate fatally.

The success attending the induction of labor in these cases would argue that under the circumstances the fetus is practically a foreign body and one whose presence the system resents. The experience of the author is limited to ten cases and in all of these labor terminated as quickly as possible, resulting in no maternal death and the death of only one child. This child was born dead and had evidently been so for several days. One of these cases, a primiperra, began having convulsions at 7 a. m., one following another in rapid succession, until about 11 p. m., when the patient was first seen. These friends of the patient stated that up to this time she had more than fifty convulsions. Examination showed the cervix soft and commencing to dilate. The patient was given morphine sulphate grains a half, hyperdermically, placed under chloroform, cervix dilated manually and the child extracted with forceps. The convulsions ceased at once. The child was deeply asphyxiated but was revived without much difficulty: the mother remained in deep coma for more than fifty hours and then gradually regained consciousness. She was freely purged with sulphate magnes and elaterium and made an uneventful recovery and has remained well. While we recognize the many perplexing conditions that may arise in individual cases, our own experience and a careful study of the literature bearing on this subject leads us to the following conclusion. If the patient is first seen in convulsion give at once Morph. Sulph. grains a half. This will generally control the convulsion until an examination can be made. Place the patient in the left lateral position, that the saliva may flow out of the mouth and to facilitate vaginal examination. Then if labor has commenced, proceed to terminate as rapidly as possible, using the forceps if necessary. If the cervix is rigid and labor has not commenced, give chloroform to full anæsthesia and proceed to dilate the cervix. This should be done manually if possible. If not insert a cervical dilator, preferably McLean or the large bag of Charpentier. Just as soon as the cervix is fully dilated apply forceps and deliver quickly, but of course with due regard for the integrity of the maternal tissues. This means of treatment has given the

best results in the hands of a vast majority of the leading obstetricians and it is **certainly** indicated if we reflect that two lives are at stake and that the life of the fetus is **greatly threatened** as that of the mother. These measures, morphine, purgation and immediate delivery, seem to offer the best chances to both mother and child. The morphine puts the nervous system in splints while purgation and delivery as here applied are true eliminants.

Dr. W. P. Gatlin moved that the President's address, the address of welcome, and the response to the same, be received with the thanks of the Association, and that they be referred to the Publication Committee.

The following new members were received into the Association.

Drs. G. Y. Gillespie, Duck Hill, Montgomery county; D. W. Coker, New Albany, Union county; E. A. Cheek, Arcola, Washington county; I. E. Stennis, McComb City, Pike county; W. M. Wroten, Magnolia, Pike county.

Dr. O. B. Quinn, chairman of the committee to consult some lawyer in reference to the Mississippi Department of Public Health destroying the name of the Mississippi State Medical Association, reported the following statement from Judge Calhoun: 1. "No act has repealed the charter of the Mississippi State Medical Association. 2. The Mississippi State Medical Association has been recognized by the legislature in authorizing it to nominate members of the State Board of Health to the Governor, and this function stands unrepealed. 3. The act of 1897 simply creates a 'Department of Public Health,' and makes the constituents of that 'Department' the Mississippi State Medical Association, and all State, district and county medical societies and associations. This act therefore distinctly reorganizes the Mississippi State Medical Association by name. It even provides that any licensed practitioner of medicine a graduate—may be a member of the 'Department,' even though this Association might refuse him as a member. 4. The 'Department' contemplated is designed as advisory and for the compilation of the medical learning and wisdom of the State, and it in no way conflicts with the powers of the Mississippi State Medical Association. The two are totally different entities."

On motion of Dr. Street the following resolution was adopted:

Resolved, That the grateful thanks of the Mississippi State Medical Association are hereby tendered to the medical members who were senators and representatives of the Mississippi legislature at its sessions of 1886-'97-'98, and also the assisting members of the Mississippi State Medical Association, for their untiring efforts to upbuild and enlarge the functions of the Association.

The Association then went into a recess for ten minutes to determine as to whether the Mississippi Department of Public Health should be adopted.

On motion a roll call of the members was taken and ninety "ayes" were recorded for the adoption of the Mississippi Department of Public Health.

Dr. W. M. Paine, on motion of Dr. H. H. Haralson, was elected temporary chairman, and Dr. J. R. Tackett, on motion of Dr. H. M. Street, was elected temporary secretary.

The motion of Dr. W. G. Kiger, for the adoption of the report of the Committee on Public Health of the Mississippi State Medical Association, recommending the organization of the Mississippi Department of Public Health, was then placed before the members of the Mississippi State Medical Association.

On motion of Dr. H. H. Haralson a roll call of said members was taken and ninety "ayes" without a dissenting vote, were recorded in favor of the adoption of said report.

A permanent organization of the Department of Public Health was then perfected by the unanimous election of Dr. W. G. Kiger, as president, on motion of Dr. H. H. Haralson, and the election of Dr. J. R. Tackett, as secretary, on motion of Dr. H. N. Street.

The constitution and by-laws of the Mississippi Department of Public Health, herewith appended, were then read and adopted.

Constitution and By-Laws of the Mississippi Department of Public Health, as Adopted on the Third Wednesday of April, 1898.

ARTICLE I—NAME.

The Department shall be known and designated as the Mississippi Department of Public Health.

ARTICLE II—OBJECT.

The object and purpose of the Department shall be the collection of vital statistics, the development of medical literature

and a general superintendence over the health interests of the State.

ARTICLE III—MEMBERSHIP.

Section 1. Any licensed practitioner of medicine in the State of Mississippi, who is a graduate of an approved institution of medicine, may, on application, have his name enrolled as a member of the Department.

Section 2. Membership in the Department shall be forfeited by a violation of the rules and regulations of the Department.

ARTICLE IV—SEAL.

The Department shall have a seal, having around the margin the words, "Mississippi Department of Public Health," and in the center such device as the Department may select; and the acts of the Department shall be authenticated by its seal.

ARTICLE V—OFFICERS.

Section 1. The officers of the Department shall be a president and secretary, who shall be elected for a term of one year each, and an executive committee, consisting of one member from each congressional district, who shall be appointed by the President.

Section 2. The President shall preside at all meetings of the Department, preserve order and regulate the debates and other business according to parliamentary usage, have general superintendence over the vital and medical statistical work of the department, and perform all other duties that may be required of him. He shall not be eligible for two successive terms.

Section 3. The Secretary shall give due notice of all meetings of the department, keep a correct list of all of its members, keep accurate minutes of the proceedings of the Department, preserve the records of the Department in distinct and regular files, conduct such correspondence of the Department as may be required of him, read at the meetings of the Department such communications and answers as may have been received or written during the preceding recess, and deliver his books and papers to his successor when he retires from office.

ARTICLE VI—BUREAUS.

Section 1. The Bureau on Public Health of the Department shall be the State Board of Health.

Section 2. The Bureau on Vital Statistics shall be the Hospital Medical College, when established in Vicksburg.

Section 3. The Bureau on State Medicine of the Department shall be the Executive Committee of the Department.

ARTICLE VII—COMMITTEES.

The Executive Committee of the Department shall govern and direct the work of the Department and carry out its duties as prescribed by law.

ARTICLE VIII—MEETINGS.

The regular meeting of the Department shall be held annually in the Capitol of the State, on the 3d Wednesday of April, 1898, and shall continue in session from day to day until all its business is transacted.

ARTICLE IX—RULES AND REGULATIONS.

Section 1. Rules and regulations of the Mississippi State Medical Association.

Section 2. Rules and regulations of the State Board of Health of Mississippi.

Section 3. Code of Ethics of the American Medical Association.

ARTICLE X—ORDER OF BUSINESS.

1. Calling the roll.
2. Reading the minutes.
3. Reports of officers and Executive Committee.
4. Unfinished business.
5. New business, including the election of officers.
6. Installation of officers elect.
7. Adjournment.

ARTICLE XI—AMENDMENTS.

The constitution and by-laws of the Department may be altered, amended or suspended at any time by a two-thirds vote of those present and voting at the regular meetings of the Department.

The recess adjourned and the Association then resumed its deliberations.

Dr. Henry Posert, of Memphis, read a valuable paper on "Imperative Ideas."

On motion of Dr. Dunn the paper was received with thanks of the Association and referred to Publication Committee. Discussed by Drs. J. A. Crisler, J. M. Buchanan, J. C. Ballard. Discussion closed by Dr. Posert.

On motion, Association adjourned to meet at 9 o'clock tomorrow.

MORNING SESSION.—9:30 O'CLOCK.

Thursday, April 21, 1898.

Association called to order by the President and the regular order of business was taken up.

First paper of the morning was read by H. M. Folkes, Jackson, on "Our Duties as Public Educators." Moved and carried that the paper be referred to the Publication Committee, with thanks of the Association. On motion of Dr. Minor this paper was requested published in the New Orleans and Jackson dailies, on account of its general interest to both the profession and laity at the present time. Carried.

"Phlegmonous Erysipelas, Necessitating Castration"—paper by S. A. Majure, Dixon. Moved that the paper be referred to Committee on Publication, with thanks of the Association. Discussed by Dr. Kendrick.

"Appendicitis—Report of Three Cases," by Drs. Gilleylen and Luse, Dover. Dr. F. D. Smythe, of Memphis, also reading a paper on "Appendicitis," a motion was passed that both papers be discussed under one heading. Moved that the two papers be received, with thanks of Association, and be referred to Committee on Publication. Discussed by Drs. Minor, Crisler, Christmas, Folkes, Crofford Krauss, Holden, Goltman. Paper closed by Dr. Smythe.

Dr. M. Galtman, of Memphis, read a paper on "The Treatment of Osteo-Myeletis." Paper received, with thanks of Association, and referred to Committee on Publication. Drs. Krauss-Robbins, Christmas, Kendrick, Crisler, Smythe, Ellett, and Minor of Memphis. Paper closed by Dr. Galtman.

The chairman of the Executive Committee reports the following new names for membership which were accepted: Drs. S. D. Luse, Dover, Yazoo county; W. G. Dorrab, Myles, Copiah county; H. M. Klingman, Bolton, Hinds county; Thos. Purser, Philipp, Tallahatchie.

On motion of Dr. Young a committee of three, composed of

Drs. Young, Quinn and Gant, with the President's name added, were instructed to extend to General E. C. Walthall, U. S. Senator from Mississippi, who is quite sick at Washington, the following message of sympathy:

"To Mrs. E. C. Walthall, Washington, D. C. :

"The Mississippi State Medical Association now in session at Jackson desire to express to you their sincere sympathy on account of the critical illness of our beloved senator, Gen. Walthall, and pray for his speedy recovery and that his useful life be spared many years to his family and to the State that loves him so well."

W. M. PAINE,
Pres. Miss. State Med. Assn.
J. W. YOUNG.
H. A. GANT.
O. B. QUINN.

AFTERNOON SESSION—2:30 O'CLOCK

Association convened at 2:30 o'clock, Dr. Paine in the chair.

The following article taken from the Meridian News was read before the Association :

"SPEAKS FOR ITSELF—Office of W. W. Payne, Physician and Surgeon, Meridian, Miss., September 2, 1897. This is to certify that I have used liquid electricity in some cases of rheumatism. I was pleased with the results. I have also used it in many cases of cramps and colic with best of results. I used the liniment on myself in a case of severe sprain of the leg and knee. It gave me more relief than any liniment I used. It is the best liniment I know of.

W. W. PAYNE."

This article was placed in the hands of the Executive Committee and, as the charge was not sustained, Dr. Payne was exculpated and the matter dropped. A telegram from Dr. Payne stated that the newspaper article only came out in one issue and was not authorized by him.

"Dislocation of the Astragalus, Requiring Removal." Title of paper read by J. A. Crisler, of Yazoo City. Moved that the paper be received with thanks of the Association and referred to Publication Committee.

E. C. Ellett, of Memphis, read a paper on "Acute Inflammation of the Middle Ear." Paper referred to Publication Committee, with thanks to its author.

J. L. Minor, of Memphis, read a paper on "A Few Points to

the General Practitioner on the Treatment of Eye and Ear Diseases." Paper referred to Publication Committee, with thanks to the author. Discussed by Drs. Crisler, Ellett and Street.

Dr. Wm. Krauss, of Memphis, read a paper on "The Diagnostic Value of Hæmoglobin—Second Estimation and a Simple Bedside Method for Same." Paper received, with thanks, and referred to Publication Committee. Discussed by Dr. Galtman. Closed by Dr. Krauss.

"Empyema." Title of paper read by J. T. B. Berry, of Brandon. Received with thanks to the writer and referred to Publication Committee.

Dr. H. A. Minor, of Macon, read a paper on "The Pathology of Fever." Paper received with thanks of the Association and referred to Publication Committee. Discussed by Drs. Krauss, Smythe, Galtman. Closed by Dr. Minor.

"Should Physicians be Required by Law to Reveal the Secrets of Their Patients?" Paper by Dr. Carroll Kendrick, of Kendrick. Paper received with thanks of Association and referred to Committee on Publication.

On motion, Association adjourned to meet at 9 o'clock.

NIGHT SESSION.

Association convened at 9 o'clock.

On motion of Dr. Trotter a resolution was offered to place the name of Dr. G. W. Trimble, of Grenada, on the roll of honorary members. Referred to the Executive Committee.

On motion, the resolution on "Oral Hygiene," adopted by the State Dental Association and to be co-operated in by a committee from the State Medical Association, in reference to the publication and introduction of a primary work on Oral Hygiene, to be used as a text book in our public schools, etc., was referred to the Executive Committee.

Following is the resolution:

Resolutions adopted by the Committee on "Oral Hygiene," appointed by the Mississippi Dental Association, April, 1898.

Resolved, first, That each member of this committee use their influence with the Medical profession throughout the State, and especially with those in their immediate locality, to get their opinion and assistance in regard to the publication and introduction of a primary work on "Oral Hygiene," to be used as a text book in our public schools, for the better education of the pupils along this line.

Resolved, second, That each member of this committee formulate a plan and contents, or synopsis of such a primer and at committee's next regular meeting, or before if practicable, compare same, and, from such comparison and exchange of ideas regarding the subject, make a report in the form of a recommendation at the next regular meeting of the Mississippi Dental Association, as to the ideas and views of this committee as a whole, which shall be subject to further action of said Association.

Signed: J. D. WISE, Chairman.

GEO. B. CLEMENT, Secretary.

J. D. WISE,	} Committee.
GEO. B. CLEMENT,	
W. E. WALKER,	
W. O. TALBOT,	

First paper of the evening by Dr. T. J. Crofford, of Memphis, on "Some Thoughts on Cancer of the Uterus." Paper received with thanks to the author and referred to Publication Committee. Discussed by Drs. Rowan, Krauss, Smythe, Young. Closed by Dr. Crofford.

The Executive Committee, reporting on the case of Dr. Trimble, of Grenada, recommend that Dr. Trimble be made an honorary member of the Association and that all dues, etc., be suspended hereafter. The recommendation was carried unanimously by a rising vote of the Association.

The chairman of the Executive Committee on the Resolution of the Dental Association made a report and same was referred to Dr. J. F. Hunter, Secretary State Board of Health.

"Malarial Hematuria," paper by L. A. Murdock, of Woodville. Received with the thanks of the Association and referred to Publication Committee. Discussed by Drs. Haralson, Krauss, Dunn, Galtman.

Next paper was read by Dr. S. R. Dunn, of Greenville, titled, "Yellow Fever."

Dr. O. L. Bailey, of Ocean Springs, read a paper on "Yellow Fever in Ocean Springs, 1897."

Papers of Drs. Dunn and Bailey referred to Publication Committee with thanks of the Association. Discussed by Dr. Krauss.

Owing to the lateness of the hour, the Association was adjourned to meet at 9 o'clock tomorrow, when the papers on "Yellow Fever" would be discussed.

On motion of Dr. Quinn a resolution of thanks was voted Judge Calhoun for his kindness in giving the law on the subject referred to him yesterday, for which he would receive no remuneration.

MORNING SESSION.

Friday, April 22, 1898.

Association convened at 9 o'clock, Dr. Paine in the chair.

The first order of business was the discussion of the papers on "Yellow Fever." Discussed by Drs. Haralson, Folkes, Robbins, Martin, Gant. Discussion closed by Drs. Dunn and Bailey.

On motion, the Nominating Committee made the following report:

Mr. President: Your Nominating Committee beg leave to make the following report: We make the following nominations:

For President—Dr. C. Kendrick.

For First Vice-President—R. E. Jones.

For Second Vice-President—H. L. Sutherland.

For Recording Secretary—J. R. Tackett.

For Assistant Recording Secretary—C. H. Trotter.

For Corresponding Secretary—D. S. Humphreys.

For Treasurer—J. F. Hunter.

For Executive Committee, the following—Drs. H. A. Minor, W. S. Weissinger, S. R. Dunn, J. M. Smith, W. H. Barr, Buford Larkin, N. L. Clark.

For Publication Committee—Drs. J. F. Hunter, J. R. Tackett, E. M. Ellis, T. T. Bonner, H. H. Haralson.

For Committee of Arrangements—Drs. C. Kendrick, J. R. Tackett, J. F. Hunter, B. L. Culley and J. P. Berry.

For Committee on Necrology—Drs. J. W. Gilbert, B. N. Ward, L. A. Murdock, T. Teunisson, C. D. Mitchell.

For Committee on Contributions—Dr. J. R. Tackett, Secretary; Dr. C. S. Humphrey, Corresponding Secretary; Dr. C. H. Trotter, Recording Secretary; Drs. H. H. Haralson and O. L. Bailey.

For Committee on Public Health—Dr. W. M. Paine, for First District; Dr. S. M. Watson, for Second District; Dr. W. G. Kiger, for Third District; Dr. L. T. Fox, for Fourth District; Dr. G. C. Phillips, for Fifth District; Dr. W. W. Robertson, for Sixth District; Dr. T. P. Lockwood, for Seventh District.

For Committee on Prize Essays—Drs. H. A. Gant, J. M. Buchanan, J. D. Smythe, Chesley Daniel.

For Delegates to American Medical Association:

State at Large—Drs. G. W. Trimble, O. B. Quinn, W. M. Paine, W. W. Robertson, H. A. Minor, T. W. Foster, W. P. Gatlin, N. E. Whitehead, J. R. Tackett, W. G. Kiger, O. L. Bailey, P. J. McCormack, L. A. Murdock, S. A. Majure, E. M. Ellis, H. L. Sutherland, B. A. Shepard.

District No. 1—Dr. R. P. Wendell.

District No. 2—Dr. S. M. Watson.

District No. 3—Dr. M. J. Alexander.

District No. 4—Dr. W. H. Bell.

District No. 5—Dr. Victor Hamilton.

District No. 6—Dr. R. L. Hagaman.

District No. 7—Dr. J. A. Rowan.

For chairmen of various sections as follows:

On Hygiene—E. A. Cheek, M. D.

On General Medicine—J. D. Symth, M. D.

On Surgery—J. A. Crisler, M. D.

On Obstetrics—J. W. Young, M. D.

On Gynecology—M. J. Lowery, M. D.

On Diseases of Children—P. W. Rowland, M. D.

On Nervous Diseases—T. J. Mitchell, M. D.

On Bacteriology—J. N. D. Shinkel, M. D.

Ophthalmology—R. D. Sessions, M. D.

Materia Medica—R. E. Howard, M. D.

Diseases of Rectum—Eugene Johnson, M. D.

Dermatology—B. D. Watkins, M. D.

Venereal Diseases—J. L. McLean, M. D.

Otology—W. A. Johns, M. D.

Rhinology—Henry Christmas, M. D.

Respectfully submitted,

H. A. GANT, Chairman.

H. N. STREET, Secretary.

The following members were added, by vote of the Association, to the delegates to the American Medical Association, viz: J. N. D. Shinkle, H. A. Gant, H. N. Street, W. A. Johns.

Respectfully,

H. N. STREET,

Secretary.

The Nominating Committee made the following resolution:

“Resolved, That each chairman be requested to comply with sec-

tion 6, article 5, of the Constitution and By-Laws, which requires him to associate with him three members as a committee of his section whose duty it shall be to present papers, reports and progress in his section during said chairman's appointment, and that the chairman notify each member of his section before the 1st day of June each year."

The Committee on Publication made the following report:

The Committee on Publication begs to report that it has investigated the books of the Editor of the Medical Record and Transactions and find the same correct. The investigation revealed the fact that expenses of publication, including printing, stationery, postage, the binding of twenty-four volumes, etc., amounted to \$619. Revenue from subscription and advertisement, \$503; amount placed in the hands of the editor by the Treasurer, \$100. Showing an excess of expenditure over receipts to be \$16. This statement shows transaction to March 31, 1897.

E. C. COLEMAN.

J. R. TACKETT.

W. G. KIGER.

C. M. MURRY.

O. B. QUINN.

J. H. RHODES.

Dr. C. L. Culley, of Jackson, offered the following: "Realizing the importance and necessity of some uniform system of public health laws operative in all States and Territories of our Union, co-operative with the several States and Territories the Mississippi State Medical Association resolves: First, That the Caffery bill now pending before congress does not and can not be effective in meeting the public interest and demands. Second, That a National Department of Public Health should be established in accord with the provisions of the bill of the American Medical Association or some such measure as will best serve the public interest, and that we urge upon our senators and representatives to use all proper endeavors to that end."

Discussed by Drs. Robbins, Haralson, Kiger, Crisler, Gant, Culley, Hunter.

Resolution carried by overwhelming majority.

Adjourned until 2:30 p. m.

AFTERNOON SESSION—2:30 O'CLOCK.

Meeting called to order, President in the chair.

Dr. H. Christmas, of Tchula, offered the following resolution: "Whereas, the State Medical Association of Mississippi has learned with deep regret and profound sorrow that Hon. E. C. Walthall, the distinguished soldier, the sublime patriot and far-seeing statesman, has passed to the bourne from which no traveler returns; and, whereas, his life in peace and war has been self-sacrificing, devoted to his people whom he loved and who loved him for the dangers he had passed: therefore, be it resolved, That the sympathy of this Association goes out to his noble wife in this hour of her joint affliction with the commonwealth."

Dr. J. T. B. Berry, of Brandon, read a paper on "Endometritis." Referred to Publication Committee, with thanks to its author. Discussed by Drs. Minor, Haralson, Miller, Paine, Gant, Crisler. Discussion closed by Dr. Berry.

"Some Interesting Loperotomy Cases," by H. A. Minor, of Macon. Paper received with thanks of the Association and referred to Publication Committee. Discussed by Dr. Hardy, Culley, Holder, Rhodes.

"Podalic Version—Report of Two Cases," by W. A. Carnes, of Kosciusko. Paper received with thanks of the Association and referred to the Committee on Publication. Discussed by Drs. Culley, Minor. Closed by Dr. Carnes.

Dr. C. M. Holder, of Memphis, read a paper on "Duties of the Medical Officer in the Merchant Marine Service." Paper received with thanks and referred to Committee on Publication. Discussed by Drs. Rhodes, Folkes, Rowan, Crisler, Gant.

The paper of Dr. Holder being one of such vital interest, the following resolution was made by Dr. Haralson and passed by the Association: "Resolved. That this Association endorse the paper on the "Merchant Marine," by Dr. C. M. Holder. Resolved, That the Secretary be instructed to publish this paper at once in the Journal of the Association. Resolved, That 1000 reprints be made and one copy be sent to each of the Congressmen and Senators of the United States; especial attention of the Mississippi delegation being called to the paper."

On motion of Dr. Haralson, it was ordered that the chairmen of the various sections be requested to have stationery struck off.

The retiring President then introduced the new President,

Dr. C. Kendrick, who very gracefully thanked the Association for the honor conferred upon him, etc.

On motion of Dr. Gant a vote of thanks was extended the retiring President, Dr. Paine, and the Secretary, Dr. Tackett.

On motion of Dr. K. P. Perkins a vote of thanks was also extended to the railroads, hotels, etc.

On motion of Dr. Crisler the Association adjourned to meet in Jackson on the third Wednesday in April, 1899.

W. M. PAINE, President.

J. R. TACKETT, Secretary.

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IN MEMORIAM.

D. D. MONTGOMERY, - - Greenville, Miss.

CONSTITUTION AND BY-LAWS

—OF THE—

MISSISSIPPI STATE MEDICAL ASSOCIATION,

AS ADOPTED 1893.

ARTICLE I.—NAME.

This Association shall be known and designated as the MISSISSIPPI STATE MEDICAL ASSOCIATION.

ARTICLE II.—OBJECT.

The objects and purposes of this Association shall be the advancement of knowledge upon all subjects connected with the healing art, the elevation of character and the protection of the proper rights and interests of those engaged in the practice of medicine, and the study of the means calculated to render the medical profession most useful to the public and subservient to the great interests of humanity.

ARTICLE III.—MEMBERSHIP.

SECTION 1. To entitle a person to a membership in this Association, he must be a graduate of a respectable medical school, a licentiate of some approved medical institution and a resident of the State of Mississippi, and a licentiate to practice medicine under the laws thereof, and of good moral and professional reputation.

SEC. 2. Any non-resident, graduate of a respectable medical school, may become a member of this Association in the same way as resident members, but shall not be allowed to vote upon any question pertaining to the State statutory privileges of the Association.

SEC. 3. Any resident member of this Association moving out of this State, shall by such act become a non-resident member.

SEC. 4. Any physician who shall procure a patent for a remedy, or instrument of surgery, or who shall enter into a collusive agreement with an apothecary to receive pecuniary compensation or patronage for sending his prescriptions to said apothecary, or who prescribes a remedy without knowing its composition, or who shall hereafter give a certificate in favor of a patent remedy

or instrument, shall be disqualified from becoming or remaining a member.

SEC. 5. Every candidate for membership shall be proposed in writing by three members of the Association ; and all propositions for membership shall be referred for final action to the officers of the Association.

SEC. 6. Every candidate elect for membership before being admitted must sign a declaration to abide by the Constitution and By-Laws and Code of Ethics of the Association, and pay an admission fee of three dollars, and first year's dues of two dollars.

SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and three officers who admit the applicant to membership.

SEC. 8. Every member shall receive a certificate of membership, signed by the officers of the Association, in the words following:

This is to certify that A. B. was admitted a member of the Mississippi State Medical Association on the _____ day of _____, A. D., 189____ C. D., President.

Attest:

R. S., Recording Secretary.

[SEAL]

E. F.,	}	Vice-Presidents.
G. H.,		
I. K.,	}	Executive Committee.
L. M.,		
N. O.,		
ETC.,		

SEC. 9. This Association may elect honorary members by a vote of three-fourths of the members present, who shall receive the same form of certificate as other members, with the addition of the word "honorary" before the word member. Honorary members shall not be required to pay annual dues, and shall have the privileges usually accorded to the membership.

SEC. 10. All resignations of membership shall be made in writing and accompanied with a certificate from the Assistant Secretary, that all dues to the Association have been satisfied, but no member shall be permitted to resign while charges are pending against him.

SEC. 11. If any member shall violate the laws or regulations of this Association, upon a charge against him being presented by the Executive Committee, it shall be their duty to notify the accused member of the same, and if, after due investigation, they consider the charge to be sustained, they shall report the case with their decision to the Association as soon as practicable, notifying the accused member of the time when the report is to be made. If the accused member shall fail to come forward and exculpate himself, he shall be reprimanded or expelled by a vote of two-thirds of the members present, but no vote for the reprimand or expulsion of a member shall be taken except at a regular meeting, at which not less than twenty-four members are present, and of which meeting due notice has been given.

ARTICLE IV.—OFFICERS.

SECTION 1. The officers of this Association shall be a President, two Vice-Presidents, a Recording Secretary, an Assistant Secretary, a Corresponding Secretary, a Treasurer and an Executive Committee of seven, who shall serve until their successors are elected.

SEC. 2. The officers of the Association shall be elected as hereinafter indicated. The Presidents and Vice-Presidents for a term of one year each, the members of the Executive Committee for a term of two years each, and the Secretaries and Treasurer for a term of three years.

SEC. 3. The officers of the Association, acting as a committee of the whole, shall constitute a Committee on Credentials, to whom all propositions of membership shall be referred for final action and shall, during the sessions of the Association, act as a steering committee, to govern and direct its scientific deliberations, with full powers to remove from before the Association, by a point of order, any discussion that may be deemed subversive of its true objects and purposes.

SEC. 4. The President shall preside at all meetings of the Association, preserve order and regulate the debates and other business according to parliamentary usage; prepare and deliver, at the opening of the annual meeting, an address upon some subject connected with the interest of the Association, and perform all other duties that may be required of him. He shall not be eligible for two successive terms.

SEC. 5. It shall be the duty of the Vice-Presidents, accord-

to seniority, to perform all the duties appertaining to the Chair, in the absence of the President; but if none of them be present, the Association shall elect a member to act as President pro tem.

SEC. 6. *Duties of Recording Secretary*—It shall be the duty of the Recording Secretary to give due notice of all meetings of the Association, and keep a correct list of all its members. He shall keep accurate minutes of the proceedings of the Association, including the names of the members in attendance; such papers of the Association as are not necessarily recorded, he shall preserve in distinct and regular files, holding them always accessible to the inspection of the members, and he shall deliver his books and papers to his successor when he retires from office, and he shall be ex-officio a member of the Committee on Publication.

SEC. 7. *Duties of Assistant Secretary*—It shall be the duty of the Assistant Secretary to receive from members their admission or initiation fee, and annual contributions, and pay the same over to the Treasurer, and he shall assist the Recording Secretary in the performance of any duty that may be assigned to him; he shall be a member ex-officio of the Committee of Arrangements.

SEC. 8. *Duties of Corresponding Secretary*—The Corresponding Secretary shall conduct all correspondence of the Association with individuals and societies, except such as relates to its pecuniary affairs. He shall read to the Association all communications and answers which he may have received or written during the preceeding recess, and then deliver them to the Recording Secretary, and he shall have the necessary expense of the same defrayed from the funds of the Association.

SEC. 9. *Duties of Treasurer*—The Treasurer shall receive all moneys belonging to the Association and disburse the same as directed, by warrant signed by the President of the Association and countersigned by the Recording Secretary, and he shall be ex-officio a member of the Committee on Publication.

SEC. 10. *Executive Committee*—The Executive Committee shall fix the annual dues and membership fees subject to the approval of the Association, act with the other officers as a Committee on Credentials, audit all accounts, harmonize all differences amongst the members of the Association, and impartially investigate and report any infringement of the laws of the Association.

ARTICLE V—STANDING COMMITTEES.

SECTION 1. The standing committees of the Association shall be: On Publication, Arrangements, Necrology, Contributions, Special Sections, Public Health and Prize Essays.

SEC. 2. The Committee on Publication shall consist of the Recording Secretary and Treasurer and three other members of the Association, to be appointed as hereinafter indicated, whose duty it shall be to attend to the publication of the proceedings, and such essays and reports as the Association may direct.

SEC. 3. The Committee on Necrology shall consist of five members of the Association from different parts of the State, to be appointed as hereinafter indicated, whose duty it shall be to collect and report brief biographical notices of deceased members and preserve the statistics and other memorial records of the Association.

SEC. 4. The Committee of Arrangements shall consist of the President, Recording Secretary and three other members whose duty it shall be to provide for the meetings of the Association at least one month before the annual meeting.

SEC. 5. The Committee on Contributions shall consist of the three Secretaries, and two other members of the Association, whose duties it shall be to receive and consider all scientific papers for the purpose of reporting such as may be found worthy of publication, subject to the decision of the Association, and shall divide the scientific work of the Association into such sections as compose the various branches of medicine and surgery, for the purpose of having a chairman of each section appointed by the nominating committee.

SEC. 6. Each chairman of the section to which he is appointed shall, as soon as practicable after his appointment, associate with him three members as a committee of his section whose duty it shall be to present papers, reports, and progress in section, during the term of the chairman's appointment.

SEC. 7. The Committee on Public Health shall consist of one member from each Congressional District, whose duties it shall be to use their best endeavors to secure such legislation as may be needed or desired by the Association, making annual reports of its action, with such suggestions and recommendations as may appear necessary and proper to accomplish the objects and purposes of the Association: and to organize district medi-

cal associations, with county sub-divisions, in each of their respective districts.

SEC. 8. The Committee on Prize Essays shall consist of four members of the Association, who shall designate one of its members as chairman, to which all competitive essays must be forwarded at least four months in advance of the meeting of the Association. The committee may, if it be thought desirable, select and publicly announce a subject for competitive investigation and report. A prize of one hundred and fifty dollars shall be annually awarded to the essay or report which, in the judgment of the majority of the committee may be thought worthy of the prize, and which, to entitle it to the award, must be found on experimental or chemical observation, and present ample evidence of being an original and substantial contribution to medical knowledge. None but members of the Association, in good standing, will be permitted to compete for the prize, which must be awarded by the committee only at a regular meeting of the Association. The essay shall be the property of the Association, and such as may be deemed worthy of publication shall be referred to the Committee on Contributions. Each essay must be accompanied by a motto, and by a sealed letter containing the motto, with the author's name subscribed. These sealed letters must remain unopened until the decision of the committee has been reached in regard to awarding the prize. When the committee selects and announces the subject for competitive essays, at least one session must intervene between the announcement of the subject and awarding the prize, so that competitors may have not less than twelve months for the preparation of their essays or reports. Prize essays shall be published in the Transactions without being referred to the Committee on Contributions.

ARTICLE VI.—NOMINATING COMMITTEE AND NOMINATIONS.

SECTION 1. The nominating features of the Association shall rest in the hands of a Nominating Committee, consisting of one member from each Congressional District, to be selected by the attendant resident physicians of each of said Districts (provided, if there be in attendance but one resident member of a District, he shall be constituted a member of this Committee), and reported to the President at the afternoon session of the first day of the regular annual meeting, and before entering upon the

discharge of their duties, shall be obligated by the President in the presence of their fellow-members to be governed in their actions by the best interests of the Association.

SEC. 2. The Nominating Committee shall recommend the Officers, Chairmen of Sections, Members of the State Board of Health, as provided by law, Standing Committees and Delegates of the Association, and report the same for adoption at the morning session of the last day of the regular annual meeting.

SEC. 3. In case the list, or any part of the list, of nominees presented by the Nominating Committee be not adopted by the Association, the Nominating Committee shall present new nominees for such offices as may remain unfilled, and shall continue so to do until all the Officers of the Association, Members of the Committees, Delegates, etc., are chosen.

SEC. 4. The Nominating Committee shall be discharged when all the Officers of the Association, Members of the Committees, Delegates, etc., have been chosen by the Association.

SEC. 5. In the selection of Delegates to the American Medical Association, or any State Association or Society, the several portions of the State shall be equitably represented as far as practicable by the Nominating Committee.

ARTICLE VII—MEETINGS.

SECTION 1. The regular meeting of this Association shall be held annually, at such time and place as the Association may, from time to time, determine, and shall continue in session from day to day until all its business be transacted.

SEC. 2. A quorum for the transaction of any business of the Association shall consist of not less than twenty members of the Association.

SEC. 3. Special meetings may be ordered by the President whenever requested, in writing, by twenty members of the Association.

ARTICLE VIII.

SECTION 1. The admission fee for membership in this Association shall be three dollars.

SEC. 2. An assessment of not more than two dollars of each member shall be made annually.

SEC. 3. Any person who shall fail to pay his annual dues for two successive years shall be reported to the Association as delinquent by the Assistant Secretary, and in case payment be

not made by the next regular annual meeting thereafter, he shall forfeit his right to membership, and his name be dropped from the roll of members.

ARTICLE IX—LOCAL MEDICAL ASSOCIATIONS.

SECTION 1. Local Medical Associations may be organized in each town, city, county and district in the State under the auspices of the State Association, by adopting the same form of Constitution, By-Laws and the same Code of Ethics, and its members can be incorporated into the State Association by the payment of an admission fee of one dollar.

SEC. 2. Members of Local Associations, in all cases of complaint or division, shall have the right of appeal to this Association and its decision shall be conclusive.

ARTICLE X—CODE OF ETHICS.

This Association adopts, as a part of its regulations binding upon all its members, the Code of Ethics adopted by the American Medical Association.

ARTICLE XI—ORDER OF BUSINESS.

1. Calling the Roll.
2. Registering New Members and Receiving Delegates.
3. President's Address.
4. Selection of Nominating Committee at afternoon session of first day.
5. Reports of Officers and Executive Committee.
6. Reports of Standing Committees.
7. Unfinished Miscellaneous Business.
8. New Business.
9. Report of Nominating Committee at morning session of last day.
10. Reading Minutes.
11. Installation of Officers Elect.
12. Adjournment.

ARTICLE XII—AMENDMENTS.

The Constitution and By-Laws of the Association may be altered, amended or suspended at any time by a two-thirds vote of those present and voting; *provided*, that no amendment shall be adopted at the same meeting at which it is proposed, and that a legal quorum of the Association shall be participants in its proceedings.

HONORARY MEMBERS

—OF THE—

MISSISSIPPI STATE MEDICAL ASSOCIATION.

<i>Name.</i>	<i>Residence.</i>	<i>State.</i>
William Ailes, M. D.....	Steen's Creek.....	Mississippi.
J. H. Blanks, Sr., M. D.....	Meridian.....	Mississippi.
Hon. F. G. Barry.....	West Point.....	Mississippi.
H. D. Bruns, M. D.....	New Orleans.....	Louisiana.
Hon. T. C. Catchings.....	Vicksburg.....	Mississippi.
T. J. Crofford, M. D.....	Memphis.....	Tennessee.
A. Morgan Cartledge, M. D.....	Louisville.....	Kentucky.
J. C. Denson, M. D.....	Ludlow.....	Mississippi.
Isadore Dyer, M. D.....	New Orleans.....	Louisiana.
W. A. Evans, Jr., M. D.....	Chicago.....	Illinois.
Hon. Frank Johnston.....	Jackson.....	Mississippi.
Prof. C. W. Kelley, M. D.....	Louisville.....	Kentucky.
Dr. Karl Von Ruck.....	Ashville.....	North Carolina.
Hon. J. C. Longstreet.....	Grenada.....	Mississippi.
Ex-Gov. Robert Lowry.....	Jackson.....	Mississippi.
Robert C. Myles, M. D.....	New York.....	New York.
J. S. McCain, M. D.....	Lexington.....	Mississippi.
James L. Minor, M. D.....	Memphis.....	Tennessee.
W. D. Powell, M. D.....	Torrance.....	Mississippi.
W. B. Rogers, M. D.....	Memphis.....	Tennessee.
L. Sexton, M. D.....	New Orleans.....	Louisiana.
E. P. Sale, M. D.....	Memphis.....	Tennessee.
A. G. Sinclair, M. D.....	Memphis.....	Tennessee.
Gen. J. H. Sharp.....	Crawford.....	Mississippi.
Hon. L. M. Southworth.....	Carrollton.....	Mississippi.
H. E. Stafford, M. D.....	New York.....	New York.
G. W. Trimble, M. D.....	Grenada.....	Mississippi.

ROLL OF MEMBERS

—OF THE—

MISSISSIPPI STATE MEDICAL ASSOCIATION,

N. B.—The Secretary requests members to examine this list closely, and notify him of any corrections to be made, as it is desirable to make it as accurate as possible.

EXPLANATION.—P., President; V.-P., Vice-President; R. S., Recording Secretary; C. S., Corresponding Secretary; A. S., Assistant Secretary; T., Treasurer; O., Orator; *, Non-Resident Members.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1882	W. H. Anderson.....	Pickens.....	Holmes.
1888	J. A. Alexander.....	Bolton.....	Hinds.
1886	M. J. Alexander.....	Austin.....	Tunica.
1892	L. Anderson.....	Port Gibson.....	Claiborne.
1873	W. G. Allen.....	Glenn Allen.....	Washington..
1893	W. G. Austin.....	Cayuga.....	Hinds.
1897	E. F. Arnold.....	Bellefontaine.....	Webster.
1889	Peyton R. Brown.....	Eupora.....	Webster.
1889	William Ball.....	Greenville.....	Washington.
1891	C. W. Bufkin.....	Hattiesburg.....	Perry.
1891	W. T. Bolton.....	Biloxi.....	Harrison.
1891	W. C. Brooke.....	Greenville.....	Washington.
1891	Means Blewett.....	State Line.....	Green.
1891	T. A. Barber.....	Meridian.....	Landerdale.
1891	M. E. Britt.....	Como.....	Panola.
1892	P. O. Beekman.....	Natchez.....	Adams.
1898	W. H. Bell.....	Nolen.....	Yallobusha..
1892	J. E. Banks.....	Blountville.....	Lawrence.
1892	J. C. Ballard.....	Natchez.....	Adams.
1892	J. H. Blanks, Jr.....	Laurel.....	Jones.
1893	O. L. Bailey.....	Ocean Springs.....	Jackson.
1892	J. P. Berry.....	Jackson.....	Hinds.
1875	John Brownrigg.....	Columbus.....	Lowndes..
1896	T. T. Bonner.....	Tupelo.....	Lee.
1896	E. F. Brown.....	Natchez.....	Adams.
1887	J. L. Baskin.....	Itta Bena.....	Leflore.
1873	J. W. Bennett.....	Brookhaven.....	Lincoln.
1894	S. L. Brister.....	Greenwood.....	Leflore..

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1894	A. H. Bays.....	Eupora.....	Webster.
	T. J. Birchett.....	Vicksburg.....	Warren.
1895	J. A. K. Birchett.....	Vicksburg.....	Warren.
1874	O. C. Brothers.....	West Point.....	Clay.
1884	H. P. Brisbane.....	Vicksburg.....	Warren.
1879	W. H. Barr.....	Agricult'l College.....	Oktibbeha.
1882	G. P. Blundell.....	Yazoo City.....	Yazoo.
1882	J. M. Buchanan.....	Meridian.....	Lauderdale.
1885	J. C. Brooks.....	Bolivar.....	Bolivar.
1885	F. A. Brizell.....	Arcola.....	Washington.
1886	A. J. Borroun.....	Corinth.....	Alcorn.
1883	J. B. Bailey.....	Conehatta.....	Newton.
1883	J. T. B. Berry.....	Brandon.....	Rankin.
1886	J. M. Barrier*.....	Delhi.....	Louisiana.
1888	H. D. Butler.....	Wilzinski.....	Washington.
1886	T. E. Butler.....	Ballinger.....	Texas.
1888	E. R. Bragg.....	Ocean Springs.....	Jackson.
1890	J. D. Barfield.....	Stonewall Station.....	Clarke.
1890	J. P. Bailey.....	Bailey.....	Lauderdale.
1890	E. S. Beadles.....	Water Valley.....	Yallobusha.
1897	W. R. Brumfield.....	Huron.....	Amite.
1897	E. J. Burnett.....	Rocky Springs.....	Claiborne.
1897	B. J. Barnett.....	Shrock.....	Attala.
1897	R. C. Brooks.....	Forest.....	Scott.
1893	Drury B. Crawley.....	Kings.....	Rankin.
1893	E. C. Coleman.....	Kosciusko.....	Attala.
1893	C. B. Clarke.....	Kosciusko.....	Attala.
1890	J. A. Crisler.....	Canton.....	Madison.
1890	C. P. Conerly.....	Ruth.....	Lincoln.
1890	N. G. Carter.....	Ripley.....	Tippah.
1884	N. L. Clarke, A. S.; V.-P.....	Meridian.....	Lauderdale.
1877	Matt Clay.....	Vicksburg.....	Warren.
1881	J. T. Chandler, V.-P.....	Oxford.....	Lafayette.
1886	G. M. D. Chester.....	Free Run.....	Yazoo.
1886	B. L. Culley, C. S.....	Jackson.....	Hinds.
1888	B. D. Cooper.....	Jackson.....	Hinds.
1896	C. M. Coker.....	Mansdale.....	Madison.
1898	T. B. Cox.....	Learned.....	Hinds.
1898	D. W. Coker.....	New Albany.....	Union.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1898	W. A. Carnes	Kosciusko	Attala.
1898	E. A. Cheek	Arcola	Washington.
1898	J. W. Comfort	Sallis	Attala.
1889	Henry Christmas	Tchula	Holmes.
1889	J. M. Catchings	Georgetown	Copiah.
1889	P. M. Catchings	Georgetown	Copiah.
1889	S. K. Coleman	Canton	Madison.
1891	L. M. Clarke	Pelahatchie	Rankin.
1891	J. G. Cherry	Lumberton	Pearl River.
1891	H. L. Crook	Pelahatchie	Rankin.
1891	I. H. C. Cook	Hattiesburg	Perry.
1892	E. F. Crowther	Vicksburg	Warren.
1894	C. E. Catchings	Woodville	Wilkinson.
1897	W. B. Dickins	Greenwood	Leflore.
1872	Chesley Daniel	Holly Springs	Marshall.
1883	B. F. Duke, c. s	Moss Point	Jackson.
1887	G. T. Darden	Blanton	Sharkey.
1879	B. A. Duncan	Columbus	Lowndes.
1880	S. R. Dunn, v. p	Greenville	Washington.
1884	J. W. Dulaney	Rosedale	Bolivar.
1889	S. T. Dunning	Canton	Madison.
1888	J. D. Dabney*	Birmingham	Alabama.
1893	J. M. Dampeer	Crystal Springs	Copiah.
1891	J. L. Dodge	Bolivar	Bolivar.
1891	S. R. Deans	Abbott	Clay.
1891	John E. Davis	Columbus	Lowndes.
1892	F. L. Dobson	Meridian	Lauderdale.
1895	John Darrington	Eden	Yazoo.
1897	Louis D. Dickerson	McComb City	Pike.
1898	W. G. Darrah	Myles	Copiah.
1877	C. C. Ewing	Aberdeen	Monroe.
1883	J. W. Elliott	Lake City	Yazoo.
1888	L. C. Elliott	Hilton	Yazoo.
1897	E. M. Ellis	Torrance	Yallobusha.
1889	J. D. Egger	Caledonia	Lowndes.
1894	T. F. Elkin	Nettleton	Lee.
1894	W. D. Eastland	Vicksburg	Warren.
1897	A. L. Emerson	Eudora	DeSoto.
1897	G. E. Ellis	Utica	Hinds.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1897	J. W. Eckford	Starkville	Oktibbeha.
1898	Montgomery C. Ellis	Senatobia	Tate.
1897	H. M. Folkes	Jackson	Hinds.
	J. S. Featherstone	Macon	Noxubee.
1877	T. W. Fullilove	Vaiden	Carroll.
1880	T. B. Ford	Columbia	Marion.
1882	F. L. Fulgham	Jackson	Hinds.
1888	T. W. Foster	Zeiglerville	Yazoo.
1888	Frank Ferrell	Ashland	Benton.
1897	Lee Thomas Fox	Water Valley	Yallobusha.
1878	Harris A. Gant	Water Valley	Yallobusha.
1888	W. P. Gatlin	McComb City	Pike.
1872	S. C. Gholson	Holly Springs	Marshall.
1877	W. F. Gresham	Durant	Holmes.
1877	T. H. Gordon	Oakland	Grenada.
1878	N. L. Guice, P	Meridian	Lauderdale.
1878	F. H. Gullledge	Goodman	Madison.
1888	H. S. Gully	Meridian	Lauderdale.
879	J. M. Greene, V.-P.; P	Aberdeen	Monroe.
1882	D. M. Garner	Oxford	Lafayette.
1879	J. B. Gresham, V.-P.; P	West Point	Clay.
1891	D. W. Goodman*	Mobile, Ala.	
1891	J. W. Gilbert, V.-P.; P	Corinth	Alcorn.
1891	Walton S. Greene	Aberdeen	Monroe.
1891	J. C. Gathings	Prairie Station	Monroe.
1895	J. W. Gray	Clarksdale	Coahoma.
1897	J. D. Gilleylen	Dover	Yazoo.
1898	G. Y. Gillespie	Duck Hill	Montgomery.
1884	A. C. Halbert	Columbus	Lowndes.
1873	C. R. Henderson	Deasonville	Yazoo.
1887	C. M. Henderson	Sardis	Panola.
1887	J. J. Haralson	Forest	Scott.
	George W. Howard	Vicksburg	Warren.
1875	J. C. Hall	Anguilla	Sharkey.
1893	F. O. Horne	Union	Newton.
1893	J. J. Hardin	Brooksville	Noxubee.
1897	Robert E. Higdon	Fort Adams	Wilkinson.
1897	J. V. Hamilton	Bowling Green	Holmes.
1875	Wm. Preston Hughes	Port Gibson	Claiborne.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1876	Geo. K. Harrington	Jackson	Hinds.
1884	H. H. Haralson, R. S.; P.	Biloxi	Harrison.
1883	O. A. Harrison	Meridian	Lauderdale.
1883	W. W. Hamilton	Brooksville	Noxubee.
1870	R. E. Howard, v.-P.	Durant	Holmes.
1880	C. S. Hudson	Yazoo City	Yazoo.
1880	T. R. Henderson, v.-P.	Greenwood	Leflore.
1885	T. A. Heath	Shiloh Landing	Issaquena.
1896	E. C. Hunt	Vicksburg	Warren.
1882	J. F. Hunter	Jackson	Hinds.
1885	G. S. Hunter, A. S.	Bolton	Hinds.
1889	W. W. Hall	Estabutchie	Jones.
1898	R. L. Hagaman	Centreville	Wilkinson.
1889	W. R. Harper	Rolling Fork	Sharkey.
1889	D. S. Humphries, C. S.	Greenwood	Leflore.
1891	A. J. Hall	Natchez	Adams.
1891	R. M. Hand	Shubuta	Clarke.
1891	S. B. Henton	Decatur	Newton.
1892	F. L. Hope	Tunica	Tunica.
1894	A. M. Harrelson	Daniel	Smith.
1894	J. H. Harrison	Tillatoba	Yallobusha.
1894	Geo. A. Hendon*	Louisville, Ky.	
1894	H. H. Harrison	Cynthia	Hinds.
1894	T. B. Harrison	Paynes	Tallahatchie.
1897	M. W. Hamilton	Goodman	Holmes.
1897	W. L. Howard	West	Holmes.
1869	Thomas D. Isom	Oxford	Lafayette.
1884	T. G. Ivy	West Point	Clay.
1891	B. W. Inman	Woodville	Wilkinson.
1876	Henry Izard	Meridian	Lauderdale.
1898	E. J. Johnson	Eden	Yazoo.
1897	C. A. Johnson	Banner	Calhoun.
1876	R. B. Johnson	Kirkwood	Madison.
	Charles H. Jones	Greenville	Washington.
1879	C. W. Jordan	West Point	Clay.
1880	R. E. Jones	Crystal Springs	Copiah.
1881	W. T. Johnson	Black Hawk	Carroll.
1882	J. W. Jordan	Lexington	Holmes.
1889	E. P. Jones	Hermanville	Claiborne.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1889	L. H. Jones	Phoenix	Yazoo.
1889	L. C. Jones	Madison Station	Madison.
1891	W. W. Johnson*	Melvin	Choctaw, Ala.
1893	Frank A. Jones*	Memphis, Tenn.	
1892	I. J. Jones*	Austin, Tex.	
1894	J. R. Jiggits	Canton	Madison.
1894	W. E. Jinkins	Scobey	Yallobusha.
1896	W. A. John	Corinth	Alcorn.
1883	R. S. Knox	Stonewall Station	Clarke.
1873	Carroll Kendrick	Kendrick	Alcorn.
1887	A. C. Kuyendall	Grenada	Grenada.
1880	W. G. Kiger, P.	Brunswick	Warren.
1883	J. G. Knox	Toomsba	Lauderd ale.
1891	A. L. Kline	Enterprise	Clarke.
1898	H. M. Klingman	Bolton	Hinds.
1894	W. R. Kell	Scranton	Jackson.
1877	T. P. Lockwood	Crystal Springs	Copiah.
1880	John H. Lucas	Greenwood	Leflore.
1883	W. C. Lawrence	Crawford'	Lowndes.
1883	M. J. Lowry, V. P.	Meridian	Lauderdale
1886	J. H. Love	Newport	Attala.
1886	George W. Luster	Cayuga	Hinds.
1889	Buford Larkins	Columbia	Marion.
1892	L. H. Lamkin	Natchez	Adams.
1894	W. L. Little	Wesson	Copiah.
1894	Alceid Leigh	Perthshire	Bolivar.
1896	G. S. Limerick	Vicksburg	Warren.
1898	S. D. Luse	Dover	Yazoo.
1897	S. A. Majure	Dixon	Neshoba.
1890	M. V. B. Miller	Meridian	Lauderdale.
1890	C. M. Murry	Ripley	Tippah.
1890	S. A. Morris*	Jacksonville, Florida.	
1890	H. C. McLaurin	Brandywine	Claiborne.
1874	W. H. Miller	Okolona	Chickasaw.
1874	J. H. Murfee*	Anniston, Alabama.	
1874	D. McCallum, V. P.	Westville	Simpson.
1873	Thomas H. Mays	Columbus	Lowndes.
1873	L. M. Mays	Graysport	Grenada.
1873	P. J. McCormick	Yazoo City	Yazoo.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1875	T. J. Mitchell	Jackson	Hinds.
1869	J. P. Moore, V.-P.	Yazoo City	Yazoo.
1889	T. H. Marselis	Nunnery	Amite.
1889	George H. McNeil	Newton	Newton.
1889	A. G. McLaurin	Brandon	Rankin.
1883	J. F. Moore	Estabutchie	Jones.
1895	J. B. McElroy	Stovall	Coahoma.
1895	L. A. Murdock	Woodville	Wilkinson.
1884	H. A. Minor	Macon	Noxubee.
1896	J. S. Montgomery	Starkville	Oktibbeha.
1896	J. W. Miller	Shannon	Lee.
1880	E. L. McGehee, P.	New Orleans, Louisiana.	
1882	Aurelius Martin	Hardy	Grenada.
1880	Dan M. McGehee	Shell Mound	Lefflore.
1880	D. D. Montgomery	Greenville	Washington.
1881	J. Y. Murry, P.	Ripley	Tippah.
1884	James L. Murrell	Benoit	Bolivar.
1898	E. M. Murphy	Macon	Noxubee.
1898	L. W. Magruder	Woodville	Wilkinson.
1898	J. W. McCarley	Ripley	Tippah.
1884	W. H. McFarland	Vaiden	Carroll.
1881	J. L. McLean	Winona	Montgomery.
1887	A. McCallum	Edwards	Hinds.
1887	A. K. McNair	Fayette	Jefferson.
1886	G. M. Mott*	Mitchell, Louisiana.	
1893	F. K. Mitchell	Sallis	Attala.
1893	N. J. Milstead	Tillatobia	Yallobusha.
1886	A. L. Morris	Lena	Leake.
1886	J. H. Maddox	Perthshire	Bolivar.
1886	R. D. Miller	Clinton	Hinds.
1887	Anthony Miller	Panther Burn	Sharkey.
1891	J. W. Molpus	Roy	Clarke.
1891	F. McCormick	Vossburg	Jasper.
1891	W. J. McNair	Quitman	Clarke.
1891	T. L. Myers	Meridian	Lauderdale.
1891	W. O. McNeil	Eucutta	Wayne.
1892	W. A. McPheters	Natchez	Adams.
1892	Charles D. Mitchell	Pontotoc	Pontotoc.
1894	S. H. McLean	Jackson	Hinds.
1895	John A. McDonald	Durant	Holmes.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1873	R. Anderson New	Rodney	Jefferson.
1888	E. A. Neely*	Memphis, Tenn.	
1889	N. Y. Nelson	Myles	Copiah.
1878	J. E. Noble	Fannin	Rankin.
1895	V. M. Neal	Hillsboro	Scott.
1898	W. J. Nelson	Tunica	Tunica.
1890	J. L. Owen	Mound Landing	Bolivar.
1874	J. F. O'Leary	Shreveport	Louisiana.
1875	T. J. Orendorff	Rolling Fork	Sharkey.
1882	C. E. Oatis	Hazlehurst	Copiah.
1896	W. D. Potter	Senatobia	Tate.
1890	A. B. Pitts	Hazlehurst	Copiah.
1890	K. P. Perkins	Batesville	Panola.
1890	J. H. Plunkett	Flora	Madison.
1890	W. O. Porter	Rolling Fork	Sharkey.
1883	W. M. Paine, P	Aberdeen	Monroe.
1888	Joseph B. Perkins	Choctaw Agency	Oktibbeha.
1884	J. R. Prince	Gholson	Noxubee.
1889	Isaac P. Partin	Meridian	Lauderdale.
1889	E. B. Pool	Clinton	Hinds.
1880	Geo. C. Phillips	Lexington	Holmes.
1887	G. L. Pope	Stoneville	Washington.
1881	C. S. Priestly	Canton	Madison.
1880	J. B. Pease	Concordia	Bolivar.
1891	W. W. Payne	Meridian	Lauderdale.
1891	R. E. Patrick	Lynwood	Rankin.
1894	Thos. R. Petway	Chotard	Issaquena.
1893	F. D. Priddy	Goodman	Holmes.
1895	J. H. Purnell	Vicksburg	Warren.
1895	J. Wesley Price	Booneville	Prentiss.
1896	W. E. Peek	Morton	Scott.
1897	F. M. Phillips	Acona	Holmes.
1898	Thos. Purser	Philipp	Tallahatchie.
1880	O. B. Quin	McComb City	Pike.
1883	P. W. Rowland, P	Oxford	Lafayette.
1887	S. D. Robertson	Dover	Yazoo.
	W. D. Redus	Port Gibson	Claiborne.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1889	S. M. Rainey	Osborne	Oktibbeha.
1893	W. W. Robertson	McComb City	Pike.
1893	J. L. Robertson	Gallman	Copiah.
1892	J. A. Rowan	Wesson	Copiah.
1886	J. H. Rhodes	Jackson	Hinds.
1888	J. C. Roberts	Centerville	Wilkinson.
1880	R. W. Rowland	Flora	Madison.
1880	S. D. Robbins	Vicksburg	Warren.
1886	E. A. Rowan	Wesson	Copiah.
1886	L. S. Rogers	West	Holmes.
1894	J. N. Rape	Tchula	Holmes.
1892	H. N. Street	Gloster	Amite.
1896	A. N. Steele	Columbus	Lowndes.
1890	B. A. Shepherd	Lexington	Holmes.
	H. Shannon, v.-P.	Ocean Springs	Jackson.
1889	R. G. Southall, Jr.	Areola	Washington.
1889	Z. J. Scott	Adam's Station	Hinds.
1889	S. O. Smith	Ellisville	Jones.
1878	J. Mell Smith	Coffeeville	Yallobusha.
1873	John W. Spellman	Columbus	Lowndes.
1887	S. D. G. Scruggs	Grenada	Grenada.
1887	A. B. Smith	Hatton	Yallobusha.
1887	Nolan Stewart	Jackson	Hinds.
1875	A. P. Sims	Morton	Scott.
1873	Newton C. Steele*	Chattanooga, Tenn.	
1873	H. L. Sutherland	Bolivar, P. O.	Bolivar.
1872	W. G. Sykes, P.	Aberdeen	Monroe.
1897	J. M. Shelby	Camdem	Madison.
1877	A. J. Sanderson	Vaiden	Carroll.
1881	W. B. Sanford*	Memphis, Tenn.	
1881	O. J. Sherman*	Harrison	Tallahatchie.
1891	J. M. Shamburger	Toomsba	Lauderdale.
1891	W. J. Stevenson	Lauderdale	Lauderdale.
1895	W. C. Spencer	Verona	Lee.
1895	S. D. Stennis	Meridian	Lauderdale.
1891	J. D. Smythe	Greenville	Washington.
1881	E. F. Shuler	Sallis	Attala.
1881	J. A. Shackelford	Greenville	Washington.
1881	G. A. Spivey*	Texas.	

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1883	C. C. Stockard	Atlanta, Georgia.	
1885	O. W. Stone	Greenville	Washington.
1885	John Seay	Glenora	Washington.
1886	O. H. Spence	Utica	Hinds.
1886	W. S. Sims	Jackson	Hinds.
1892	Frank D. Smythe, C. S.	Kosciusko	Attala.
1892	W. H. Scudder	Mayersville	Issaquena.
1894	R. D. Sessions	Natchez	Adams.
1894	Z. J. Scott, Jr.	Adams Station	Hinds.
1896	J. N. D. Shinkel	Friars Point	Coahoma.
1898	J. P. Synnott	Lodi	Montgomery.
1898	I. E. Stennis	McComb City	Pike.
1877	T. R. Trotter	Winona	Montgomery.
1877	G. W. Trimble, O.; P.	Grenada	Grenada.
1878	J. E. Tolbert*	Memphis, Tenn.	
1878	W. E. Todd, R. S.; V. P.	Jackson	Hinds.
1883	M. J. Thompson	Meridian	Lauderdale.
1887	J. F. Taylor	Anguilla	Sharkey.
1887	Geo. A. Teunisson	Monticello	Lawrence.
1883	B. F. Travis*	Chattanooga, Tenn.	
1886	J. C. Terrell	Leland	Washington.
1889	E. S. Turner	Ashland	Benton.
1891	R. L. Turner	Ellisville	Jones.
1891	J. R. Tackett, A. S.; R. S.	Biloxi	Harrison.
1892	John F. Therrel	Woodville	Wilkinson.
1894	C. H. Trotter, A. S.	Bogue Chitto	Lincoln.
1895	J. H. Temple	Hesterville	Attala.
1895	O. M. Turner	Jackson	Hinds.
1897	John Tackett	Richland	Holmes.
1898	J. W. Thomassa	Arkabutta	Tate.
1877	G. W. Vassar	Carrollton	Carroll.
1898	W. M. Wroten	Magnolia	Pike.
1889	J. D. Walker	Steen's Creek	Rankin.
1881	N. E. Whitehead	Greenwood	Leflore.
1877	T. L. Wilburn	Kilmichael	Montgomery.
1877	S. L. Wynne	Looxahoma	Tate.
1876	Lea Williamson	Como	Panola.
1877	B. F. Ward, O.; P.	Winona	Montgomery.

<i>Admitted.</i>	<i>Name.</i>	<i>Residence.</i>	<i>County.</i>
1882	A. A. Wheat.....	Harrison.....	Tallahatchie..
1886	C. Weathersby.....	Clarksdale.....	Coahoma.
1887	T. W. Wright.....	Pickens.....	Holmes.
1887	J. D. Weeks.....	Ackerman.....	Choctaw.
1891	J. H. Watson.....	Thornton.....	Holmes.
1891	F. L. Walton.....	Shubuta.....	Clarke.
1891	W. H. Whittle*.....	Tyler, Texas.	
1892	Polk Watkins.....	Hattiesburg.....	Perry.
1892	S. Winchester.....	Greenville.....	Washington.
1892	B. D. Watkins.....	Natchez.....	Adams.
1892	J. M. Wells.....	Cleveland.....	Bolivar.
1895	W. T. Wilkins.....	Lewisburg.....	DeSoto.
1895	D. J. Williams.....	Ellisville.....	Jones.
1892	J. S. Winters.....	Rodney.....	Jefferson.
1892	E. K. White.....	Steen's Creek.....	Rankin.
1896	R. P. Wendel.....	Aberdeen.....	Monroe.
1894	Joseph Waldauer.....	Vicksburg.....	Warren.
1894	A. J. Weissinger.....	Hernando.....	DeSoto.
1894	W. S. Weissinger.....	Hernando.....	DeSoto.
1886	Edwin Wright.....	Sardis.....	Panola.
1897	T. M. Wiley.....	Bowling Green.....	Holmes.
1897	S. M. Watson.....	Pleasant Hill.....	DeSoto.
1897	B. N. Ward.....	Carthage.....	Leake.
1887	J. W. Young.....	Grenada.....	Grenada.
1898	A. A. Young.....	Oxford.....	Lafayette.

List of Resident Members by Districts and Counties.

FIRST DISTRICT.

Alcorn County—A. J. Borroum, Carroll Kendrick, W. A. John, J. W. Gilbert.

Itawamba County—

Lee County—T. F. Elkin, T. T. Bonner, J. W. Miller, W. C. Spence.

Lowndes County—John Brownrigg, J. D. Egger, A. C. Halbert, W. C. Lawrence, Thomas H. Mays, John W. Spellman, B. A. Duncan, John E. Davis, R. P. Wendel, A. N. Steele.

Monroe County—W. J. Sykes, W. M. Paine, C. C. Ewing, J. M. Greene, Walton S. Greene, J. C. Gathings.

Oktibbeha County—W. H. Barr, J. B. Perkins, S. M. Rainey, J. L. Montgomery, J. W. Eckford.

Prentiss County—J. Wesley Price.

Tishomingo County—

SECOND DISTRICT.

Benton County—Frank Ferrell, E. S. Turner.

DeSoto County—A. J. Weissinger, W. T. Wilkins, W. S. Weissinger, A. L. Emerson, S. M. Watson.

Lafayette County—D. M. Gardner, Thomas D. Isom, J. T. Chandler, P. W. Rowland, A. A. Young.

Marshall County—C. S. Gholson, Chesley Daniel.

Panola County—M. Britt, C. M. Henderson, K. P. Perkins, Lee Williamson, Edwin Wright.

Tate County—M. C. Ellis, S. L. Wynne, W. D. Potter, J. W. Thomason.

Tallahatchie County—A. A. Wheat, T. B. Harrison, Thos. Purser.

Tippah County—N. G. Carter, J. Y. Murry, C. M. Murry, J. W. McCarley.

Union County—D. W. Coker.

THIRD DISTRICT.

Bolivar County—J. C. Brooks, J. L. Dodge, James L. Murrell, J. H. Maddox, J. L. Owen, H. L. Sutherland, J. M. Wells, J. W. Dulaney, Alceid Leigh.

Coahoma County—J. B. Pease, C. Weathersby, J. W. Gray, J. B. McElroy, J. N. D. Shinkel.

Issaquena County—T. A. Heath, W. H. Scudder, T. R. Petway.

Leflore County—J. L. Baskin, T. R. Henderson, John H. Lucas, Dan M. McGehee, N. E. Whitehead, S. L. Brister, W. B. Dickens, D. S. Humphreys.

Quitman County—

Sharkey County—J. C. Hall, W. R. Harper, T. T. Orendoff, J. F. Taylor, G. T. Darden, W. O. Porter, Anthony Miller.

Sunflower County—

Tunica County—M. J. Alexander, F. B. Forbes, F. L. Hope, W. J. Nelson.

Warren County—H. P. Brisbane, Matt Clay, E. F. Crowther, E. C. Hunt, W. G. Kiger, S. D. Robbins, T. G. Birchett, George W. Howard, W. D. Eastland, J. A. K. Birchett, J. H. Purnell, G. S. Limerick, Joseph Waldauer.

Washington County—W. G. Allen, Wm. Ball, F. A. Brizzell, H. D. Butler, S. R. Dunn, Charles H. Jones, D. D. Montgomery, G. L. Pope, R. G. Southall, J. D. Smythe, J. A. Shackelford, O. W. Stone, John Sea, J. C. Terrell, S. Winchester, W. C. Brooke, E. A. Cheek.

FOURTH DISTRICT.

Calhoun County—C. A. Johnson.

Carroll County—T. W. Fullilove, W. T. Johnson, W. H. McFarland, A. J. Sanderson, G. W. Vasser.

Chickasaw County—W. H. Miller.

Choctaw County—J. D. Weeks.

Clay County—O. C. Brothers, S. R. Deans, J. B. Gresham, T. G. Ivy, C. W. Jordan.

Grenada County—T. H. Gordon, A. C. Kuykendall, L. M. Mays, Aurelius Martin, S. D. G. Scruggs, G. W. Trimble, J. W. Young.

Kemper County—

Montgomery County—J. P. Synnott, T. R. Trotter, T. L. Wilburn, B. F. Ward, J. L. McLean, J. P. Hamer, Peyton R. Brown, G. Y. Gillespie.

Noxubee County—J. S. Featherston, J. J. Hardin, W. W. Hamilton, H. A. Minor, J. R. Prince, E. M. Murphy.

Pontotoc County—Charles D. Mitchell.

Webster County—A. H. Bays, E. F. Arnold.

Winston County—

Yallobusha County—E. S. Beadles, H. A. Gant, N. J. Milstead, J. Mell Smith, A. B. Smith, W. E. Jenkins, J. H. Harrison, E. M. Ellis, L. T. Fox, W. H. Bell.

FIFTH DISTRICT.

Attala County—E. C. Coleman, C. B. Clarke, J. H. Love, F. K. Mitchell, E. F. Shuler, J. H. Temple, B. J. Barnett, J. W. Comfort, W. A. Carnes.

Clarke County—R. M. Hand, A. L. Kline, W. J. McNair, J. W. Molpus, J. D. Barfield, F. L. Walton.

Holmes County—W. H. Anderson, John Tackett, T. M. Wiley, Henry Christmas, S. H. Howard, R. E. Howard, J. M. Hicks, J. W. Jordan, George C. Phillips, F. D. Priddy, L. S. Rogers, B. A. Shepherd, T. W. Wright, J. H. Watson, W. F. Gresham, N. C. Gulledege, J. N. Rape, John A. McDonald, J. V. Hamilton, M. W. Hamilton, F. M. Phillips, W. L. Howard.

Jasper County—F. McCormick.

Lauderdale County—T. A. Barber, J. M. Buchanan, J. P. Bailey, N. L. Clarke, H. S. Gulley, O. A. Harrison, Henry Izard, J. G. Knox, M. J. Lowry, M. V. B. Miller, T. L. Myers, Isaac P. Partin, W. W. Payne, J. M. Shamberger, W. J. Stevenson, M. J. Thompson, N. L. Guice, S. D. Stennis, F. L. Dobson.

Leake County—A. L. Morris, B. N. Ward.

Neshoba County—S. A. Majure.

Newton County—J. B. Bailey, F. O. Horne, S. B. Hinton, George H. McNeill.

Scott County—A. P. Sims, V. M. Neal, W. E. Peek, R. C. Brooks, J. J. Haralson.

Smith County—A. M. Harrelson.

Wayne County—W. O. McNeill.

Yazoo County—G. P. Blundell, G. M. D. Chester, J. W. Elliott, L. C. Elliott, T. W. Foster, C. R. Henderson, C. S. Hudson, L. H. Jones, P. J. McCormick, J. P. Moore, C. D. Robertson, John Darrington, J. D. Gilleylen, S. D. Luse, E. J. Johnson.

SIXTH DISTRICT.

Adams County—P. Beekman, J. C. Ballard, A. J. Hall, L. H. Lamkin, W. A. McPheter, B. D. Watkins, R. D. Sessions, E. F. Brown.

Amite County—T. H. Marselis, H. M. Street, W. R. Brumfield.

Covington County—

Greene County—Means Blewett.

Hancock County—

Harrison County—W. T. Bolton, J. R. Tackett, H. H. Har-
alson.

Jackson County—E. R. Bragg, W. R. Kell, H. Shannon, B.
F. Duke, O. L. Bailey.

Jones County—J. F. Moore, S. O. Smith, R. L. Turner, W.
W. Hall, D. J. Williams, J. H. Blanks, jr.

Lawrence County—J. E. Banks, Geo. A. Teunisson.

Marion County—T. B. Ford, Buford Larkin.

Pearl River County—J. G. Cherry.

Perry County—I. H. C. Cook, Polk Watkins, C. W. Bufkin.

Pike County—W. P. Gatlin, O. B. Quin, W. W. Robertson,
Louis D. Dickerson, I. E. Stennis, W. M. Wroten.

Wilkinson County—B. W. Inman, J. C. Roberts, John F.
Therrell, C. E. Catchings, L. A. Murdock, R. E. Higdon, R. L.
Hagaman, L. W. Magruder.

SEVENTH DISTRICT.

Claiborne County—L. Anderson, William Preston Hughes,
E. P. Jones, H. C. McLaurin, W. D. Redus, E. J. Burnett.

Copiah County—J. M. Catchings, P. M. Catchings, J. M.
Dampeer, R. E. Jones, T. P. Lockwood, N. Y. Nelson, C. E.
Oatis, A. B. Pitts, J. A. Rowan, E. A. Rowan, W. L. Little, J. L.
Robertson, W. G. Darrah.

Franklin County—T. B. Cox.

Hinds County—J. A. Alexander, W. G. Austin, J. P. Berry,
B. L. Culley, B. D. Cooper, F. L. Fulgham, George K. Harring-
ton, J. F. Hunter, G. S. Hunter, George W. Luster, T. J.
Mitchell, A. McCallum, M. D. Morgan, R. D. Miller, E. B. Poole,
J. H. Rhodes, Nolan Stewart, O. H. Spence, W. E. Todd, G. E.
Ellis, W. S. Sims, H. M. Folkes, Z. J. Scott, H. H. Harrison, S.
H. McLean, Z. J. Scott, jr., O. M. Turner, N. M. Klingman.

Jefferson County—A. K. McNair, R. Anderson New, J. S.
Winters.

Lincoln County—J. W. Bennett, C. P. Conerly, C. H. Trot-
ter.

Madison County—R. W. Rowland, J. M. Shelby, J. H. Plun-
kett, C. S. Priestly, R. B. Johnson, L. C. Jones, J. A. Crisler, S.
K. Coleman, J. R. Jiggits, C. M. Coker, S. T. Dunning, F. H.
Gulledge.

Rankin County—J. T. B. Berry, Drury B. Crawley, L. M. Clarke, H. L. Crook, J. E. Noble, R. E. Patrick, J. D. Walker, E. K. White, A. G. McLaurin.

Simpson County—D. McCallum.

OFFICIAL REGISTER

FROM DATE OF ORGANIZATION.

1856.

W. Y. Gadberry.....	President
M. S. Craft.....	Recording Secretary

1856 to 1869.

(No meetings held.)

1869.

E. T. Henry.....	President
Thomas D. Isom.....	First Vice-President
E. G. Banks.....	Second Vice-President
S. V. D. Hill.....	Third Vice-President
W. M. Compton.....	Fourth Vice-President
Ed. Lea.....	Recording Secretary
M. S. Craft.....	Corresponding Secretary
P. T. Bailey.....	Treasurer

1870.

S. V. D. Hill.....	President
A. B. Cabiniss.....	First Vice-President
D. B. Nailer.....	Second Vice-President
C. B. Galloway.....	Third Vice-President
B. F. Kittrell.....	Fourth Vice-President
J. D. McConnell.....	Recording Secretary
J. R. Barnett.....	Corresponding Secretary
W. Y. Gadberry.....	Treasurer

1871.

W. M. Compton.....	President
J. W. M. Shattuck.....	Recording Secretary

1872.

C. B. Galloway.....	President
D. W. Booth.....	First Vice-President
W. M. Lea.....	Second Vice-President
J. D. Burche.....	Third Vice-President
L. Shackelford.....	Fourth Vice-President
J. W. M. Shattuck.....	Recording Secretary
P. F. Whitehead.....	Corresponding Secretary
W. G. Sykes.....	Treasurer
A. A. Lyon.....	Orator

1873.

J. M. Taylor.....	President
M. S. Craft.....	First Vice-President
B. A. Vaughan.....	Second Vice-President
P. F. Whitehead.....	Third Vice-President
J. W. Bennett.....	Fourth Vice-President
J. W. M. Shattuck.....	Recording Secretary
W. A. Galloway.....	Corresponding Secretary
J. R. Hicks.....	Orator
Wirt Johnson.....	Alternate Orator
W. F. Hyer.....	Treasurer

1874.

P. F. Whitehead.....	President
P. J. McCormick.....	First Vice-President
D. W. Booth.....	Second Vice-President
S. L. Paine.....	Third Vice-President
T. H. Mayo.....	Fourth Vice-President
R. Anderson New.....	Recording Secretary
B. A. Vaughan.....	Corresponding Secretary
J. A. Campbell.....	Treasurer
W. L. Lipscomb.....	Orator
J. H. Murfee.....	Alternate Orator

1875.

M. S. Craft.....	President
R. Anderson New.....	Recording Secretary

1876.

P. J. McCormick.....	President
R. G. Wharton.....	First Vice-President

A. G. Smythe.....	Second Vice-President
W. W. Hall.....	Third Vice-President
G. C. McCallum.....	Fourth Vice-President
Wirt Johnston.....	Recording Secretary
C. A. Rice.....	Corresponding Secretary
Robert Kells.....	Treasurer
B. F. Kittrell.....	Orator
M. S. Craft.....	Alternate Orator

1877.

B. A. Vaughan.....	President
E. W. Hughes.....	First Vice-President
T. R. Trotter.....	Second Vice-President
T. P. Lockwood.....	Third Vice-President
J. T. Parker.....	Fourth Vice-President
Wirt Johnston.....	Recording Secretary
C. A. Rice.....	Corresponding Secretary
Robert Kells.....	Treasurer
D. W. Booth.....	Orator
J. E. Halbert.....	Alternate Orator

1878.

B. F. Kittrell.....	President
R. G. Wharton.....	First Vice-President
H. Hanslow.....	Second Vice-President
G. W. Vasser.....	Third Vice-President
E. P. Sale.....	Fourth Vice-President
Wirt Johnson.....	Recording Secretary
M. S. Craft.....	Corresponding Secretary
Robt. Kells.....	Treasurer
E. G. Banks.....	Orator
John Brownrigg.....	Alternate Orator

1879.

E. P. Sale.....	President
W. F. Hyer.....	First Vice-President
W. C. Jarnagin.....	Second Vice-President
William Powell.....	Third Vice-President
J. S. Cain.....	Fourth Vice-President
Wirt Johnston.....	Recording Secretary
M. S. Craft.....	Corresponding Secretary
G. K. Harrington.....	Treasurer

B. F. Ward Orator
 W. H. Baird Alternate Orator

1880.

W. F. Hyer President
 D. L. Phares First Vice-President
 H. Shannon Second Vice-President
 R. S. Toombs Third Vice-President
 W. D. Carter Fourth Vice-President
 Wirt Johnson Recording Secretary
 M. S. Craft Corresponding Secretary
 G. K. Harrington Treasurer
 S. D. Robbins Orator
 S. R. Dunn Alternate Orator

1881.

B. F. Ward President
 J. P. Moore First Vice-President
 T. W. Fullilove Second Vice-President
 John Tackett Third Vice-President
 W. W. Hart Fourth Vice-President
 Wirt Johnston Recording Secretary
 M. S. Craft Corresponding Secretary
 G. K. Harrington Treasurer
 F. E. Daniel Orator
 T. R. Henderson Alternate Orator

1882.

Wirt Johnston President
 J. M. Greene First Vice-President
 J. E. Halbert Second Vice-President
 J. T. Chandler Third Vice-President
 E. L. McGehee Fourth Vice-President
 T. W. Fullilove Recording Secretary
 M. S. Craft Corresponding Secretary
 Robert Kells Treasurer
 G. W. Trimble Orator
 W. B. Sanford Alternate Orator

1883.

J. M. Greene President
 S. N. Walker First Vice-President

D. McCallum	Second Vice-President
W. E. Todd	Recording Secretary
J. F. Hunter	Assistant Secretary
M. S. Craft	Corresponding Secretary
Robert Kells	Treasurer

1884.

D. L. Phares	President
J. B. Gresham	First Vice-President
W. A. Taylor	Second Vice-President
W. E. Todd	Recording Secretary
N. L. Clarke	Assistant Secretary
M. S. Craft	Corresponding Secretary
J. F. Hunter	Treasurer

1885.

J. B. Gresham	President
J. B. Pease	First Vice-President
S. R. Dunn	Second Vice-President
W. E. Todd	Recording Secretary
G. K. Harrington	Assistant Secretary
M. S. Craft	Corresponding Secretary
J. F. Hunter	Treasurer

1886.

R. S. Toombs	President
W. B. Sanford	First Vice-President
G. W. Trimble	Second Vice-President
W. E. Todd	Recording Secretary
P. W. Rowland	Assistant Secretary
M. S. Craft	Corresponding Secretary
J. F. Hunter	Treasurer

1887.

N. L. Guice	President
L. Sexton	First Vice-President
M. J. Thompson	Second Vice-President
W. E. Todd	Recording Secretary
W. M. Paine	Assistant Secretary
M. S. Craft	Corresponding Secretary
J. F. Hunter	Treasurer

1888.

Luther Sexton	President
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R. E. Howard	First Vice-President
F. E. Shuler	Second Vice-President
W. E. Todd	Recording Secretary
Geo. S. Hunter	Assistant Secretary
W. A. Galloway	Corresponding Secretary
J. F. Hunter	Treasurer

1889.

J. E. Halbert	President
W. A. Evans, jr	First Vice-President
W. H. White	Second Vice-President
W. E. Todd	Recording Secretary
B. D. Cooper	Assistant Secretary
J. M. Buchanan	Corresponding Secretary
J. F. Hunter	Treasurer

1890.

G. W. Trimble	President
J. Y. Murry	First Vice-President
P. W. Rowland	Second Vice-President
W. E. Todd	Recording Secretary
B. L. Cully	Assistant Secretary
S. K. Coleman	Corresponding Secretary
J. F. Hunter	Treasurer

1891.

J. Y. Murry	President
W. E. Todd	First Vice-President
N. L. Clarke	Second Vice-President
H. H. Haralson	Recording Secretary
G. S. Hunter	Assistant Secretary
B. F. Duke	Corresponding Secretary
J. F. Hunter	Treasurer

1892.

W. G. Kiger	President
J. D. Smythe	First Vice-President
A. J. Hall	Second Vice-President
H. H. Haralson	Recording Secretary
W. R. Harper	Assistant Secretary
P. W. Rowland	Corresponding Secretary
J. F. Hunter	Treasurer

1893.

E. L. McGehee.....	President
Henry Izard.....	First Vice-President
P. W. Rowland.....	Second Vice-President
H. H. Haralson.....	Recording Secretary
W. R. Harper.....	Assistant Secretary
F. D. Smythe.....	Corresponding Secretary
J. F. Hunter.....	Treasurer

1894.

P. W. Rowland.....	President
T. R. Henderson.....	First Vice-President
J. W. Gilbert.....	Second Vice-President
H. H. Haralson.....	Recording Secretary
J. R. Tackett.....	Assistant Secretary
B. L. Cully.....	Corresponding Secretary
J. F. Hunter.....	Treasurer

1895.

H. H. Haralson.....	President
M. J. Lowry.....	First Vice-President
R. E. Howard.....	Second Vice-President
J. R. Tackett.....	Recording Secretary
C. H. Trotter.....	Assistant Secretary
D. S. Humphries.....	Corresponding Secretary
J. F. Hunter.....	Treasurer

1896.

J. W. Gilbert.....	President
W. M. Paine.....	First Vice-President
B. F. Duke.....	Second Vice-President
J. R. Tackett.....	Recording Secretary
C. H. Trotter.....	Assistant Secretary
D. S. Humphries.....	Corresponding Secretary
J. F. Hunter.....	Treasurer

1897.

W. M. Paine.....	President
J. A. Crisler.....	First Vice-President
R. E. Jones.....	Second Vice-President
J. R. Tackett.....	Recording Secretary
C. H. Trotter.....	Assistant Secretary

D. S. Humphreys.....	Corresponding Secretary
J. F. Hunter.....	Treasurer

1898.

C. Kendrick.....	President
R. E. Jones.....	First Vice-President
H. L. Sutherland.....	Second Vice-President
J. R. Tackett.....	Secretary
C. H. Trotter.....	Assistant Secretary
D. S. Humphreys.....	Corresponding Secretary
J. F. Hunter.....	Treasurer

DECEASED MEMBERS.

<i>Name.</i>	<i>Postoffice.</i>
Ames, W. N.....	Starkville
Ainsworth, W. L.....	Hazlehurst
Armistead, W. H.....	Vaiden
Alford, J. T.....	Rockport
Beall, T. T.....	Vicksburg
Balfour, Wm. T.....	Vicksburg
Baley, P. T.....	Jackson
Bragg, Wm. D.....	Moss Point
Booth, D. W.....	Vicksburg
Baugh, A. S.....	Polkville
*Barksdale, E.....	Jackson
Champlin, A. P.....	Biloxi
Carson, R. B.....	Durant
Craft, M. S.....	Jackson
Cabiniss, A. B.....	Jackson
Curtiss, A. J.....	Meridian
Coffman, John R.....	
Capers, L. G.....	Vicksburg
Cage, A. H.....	Canton
Compton, W. M.....	Holly Springs
Cloud, J. L.....	Water Valley

*Honorary members.

Cannon, A. L.....	Indianola
Dancy, F. W.....	Holly Springs
Dunn, R. L.....	Yazoo City
Dulaney, W. J.....	Jackson
Davis, M. G.....	Greenwood
Dozier, A. M.....	Richburg
Diggs, D. M.....	Black Hawk
Edward, R. T.....	Vicksburg
Elkin, T. B.....	Aberdeen
Ellis, J. W.....	Canton
Ellis, A. J.....	Sardis
Fox, E.....	Forest
Fant, J. C.....	Macon
Finley, W. P.....	Fannin
Fitzgerald, P. F.....	Grenada
Farrish, J. M.....	Sartaria
Galloway, W. A.....	Jackson
Gibson, Fontaine L.....	Pelahatchie
Gadberry, L. L.....	Yazoo City
Gulledge, N. C.....	Durant
Galloway, C. B.....	Canton
Greenlee, W. R.....	Harrison
Gulledge, R. W.....	Durant
*Gadberry, W. Y.....	Yazoo City
Hicks, J. M.....	Goodman
Hill, S. V. D.....	Macon
Hart, W. W.....	Lodi
Hoover, C.....	McComb City
Hutchings, R. E.....	Greenville
Herring, W. E.....	Terry
Harrington, J. T.....	Jackson
Hughes, E. W.....	Grenada
Hall, W. W.....	Grenada
Hicks, J. R.....	Vicksburg
Halbert, J. E.....	Mound Landing
Harrell, J. D.....	DeSoto
Hamer, J. P.....	Kilmichael
*Holder, A. B.....	Memphis
Jones, J. O.....	Beulah

Johnson, H. W	Clinton
Kendall, W. T	Meridian
Kells, Robert	Jackson
Kent, W. S	Sharon
Kid, H. B	Yazoo City
Kinchloe, D. A	Sardis
Kinchloe, D. A	Batesville
Lockwood, B. M	
Lee, L. C	Graysport
Lee, T. J	Philadelphia
Lea, W. M	Holly Springs
Lloyd, W. B	Myles
Love, John T	Aberdeen
Long, John	Coffadelliah
Meed, J. A	Pearlington
McWillie, James	Jackson
Mitchell, C. J	Vicksburg
McCallum, G. C	Lake
McKie, N. W	Sharou
Monette, W. E	Warren County
Montgomery, D. D	Washington
McLaurin, Hugh C	Brandon
Maxwell, P. J	Columbus
McMartin, W. D	Black Hawk
Mabry, L. W	Goodman
Myles, William	Port Gibson
McSwyne, William	Grenada
Neal, Thomas L	Ben Lomond
Nesmith, W. J	Vicksburg
Newman, J. O	Vicksburg
Nimoeks, F. B	Lawrence
Powell, William	Grenada
Phillips, T. A	Canton
Phares, D. L	Madison Station
Pate, B. J	Sidon
Quin, D. H	McComb City
Redwood, George C	Meridian
Richardson, L	Bolivar Landing
Ringold, R. S	Grenada

Rice, C. A	Biloxi
Staples, J. D	Huntsville
Smith, Sid B	Grenada
Smith, James M	Eggs Point
Sanders, J. O	Carrollton
Sutton, D	Lexington
Stackhouse, H. C	Utica
Shackleford, Lee	Meridian
Sykes, L. M	Muldon
Sims, J. C	Forest
Smythe, A. G	Baldwyn
Shivers, J. M	Sidon
Smith, Robert	Kosciusko
*Smith, A. H	Meridian
Thomas, A. S	Buena Vista
Tackett, John	Richland
Turner, M. H	Brownsville
Turner, D. B	Winona
Vaughan, B. A	Columbus
White, L	Utica
Whitehead, P. F	Vicksburg
Williams, W. B	Edwards
Woodruff, Z. T	Vicksburg
White, W. H	Brandon
Walker, J. L	Phoenix, Arizona
Wharton, R. G	Port Gibson

Editorial.

J. R. TACKETT, M. D., BILOXI, MISSISSIPPI

Editor and Business Manager.

SUBSCRIPTION: ONE DOLLAR PER ANNUM.

Entered at the Postoffice at Biloxi, Miss., as second-class matter.

Officers Mississippi State Medical Association, 1898-'99.

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 First Vice-President—R. E. JONES, M. D. Crystal Springs
 Second Vice-President—W. L. SUTHERLAND, M. D. Rosedale
 Recording Secretary—J. R. TACKETT, M. D. Biloxi.
 Assistant Secretary—C. H. TROTTER, M. D. Bogue Chitto.
 Treasurer—J. F. HUNTER, M. D. Jackson.
 Corresponding Secretary—D. S. HUMPHREYS, M. D. Greenwood.

SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

W. G. KIGER, M. D., President. Brunswick
 J. R. TACKETT, M. D., Secretary Biloxi
 W. A. JOHNS, M. D. Corinth
 P. W. ROWLAND, M. D. Flora
 J. D. SMYTHE, M. D. Greenville
 H. A. MINOR, M. D. Macon
 H. CHRISTMAS, M. D. Tchula
 GEO. A. TEUNNISSON, M. D. Monticello
 E. A. ROWAN, M. D. Wesson

THE JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION.

At the recent meeting of the State Medical Association held in Jackson, April 20-23, 1898, it was decided that the Medical Record, previously edited by Dr. H. H. Haralson, of this city, should become the sole property of the Association, and that the name of the magazine should be known as "The Journal of the Mississippi State Medical Association." On account of Dr. Haralson's removal to another locality, it was the desire of the Asso-

ciation that the Secretary be made Editor and Business Manager of the Journal.

The Journal will be issued monthly and will contain the proceedings of the Association and all papers read during the meetings. In fact, it will be the official organ of the Mississippi State Medical Association, and its columns are always free and open to those who may desire to contribute. It shall be my object to keep the publication up to its past high standard and to bend every effort to making it truly an organ of the united profession. To this end I earnestly request the co-operation of every medical man in the State. The work of enlarging it will be vigorously pushed and I feel assured that in the near future it will be almost indispensable to the practitioners of the State.

I wish to express to Dr. Haralsen my appreciation of his kindness in giving me valuable assistance in the commencement of the work and aiding me in getting it started.

Very truly,

J. R. TACKETT, M. D.

Dr. J. A. Crisler, formerly of Canton, has moved to Yazoo City, and will there, in partnership with Dr. Hudson, continue to practice his profession. Dr. Crisler is one of the ablest physicians of the State, and Yazoo City is to be congratulated upon so valuable an acquisition to its already strong medical faculty.

Dr. D. D. Montgomery died recently at his home in Greenville, Miss. Dr. Montgomery had been a member of the State Medical Association for eighteen years, having joined in April, 1880.

Dr. Owen Stone, recently of Greenville, has removed to Bay St. Louis. Dr. Stone stands high in this State, both as a physician and citizen.

SANATORIUM

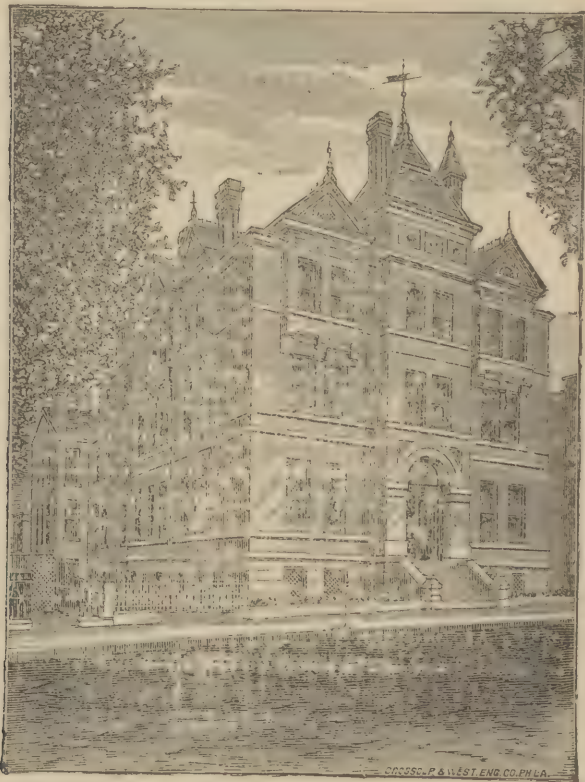
... FOR THE ...

DISEASES OF WOMEN.

Drs. MAURY & MITCHELL,

111 COURT STREET,

MEMPHIS, TENN.



This building has been erected especially as a Sanatorium for the treatment of the Diseases of Women. It has been constructed with great care and in accordance with the most approved principles of sanitary science. Its equipment with all the appliances necessary for the treatment of disease is complete. It is the endeavor of those in charge to make this a temporary home, as well as a place of rest, where invalids will find every comfort they may desire. Physicians who wish to send patients away from home for the surgical and medical treatment necessary in this class of diseases, may feel confident that everything possible will be done here for their restoration to health.

For further information DR. MAURY can be addressed at the Sanatorium.

The Journal

.....of the.....

Mississippi State Medical Association.

VOL. II.

JUNE, 1898.

No. 3.

Original Articles.

The Diagnostic Value of Hemoglobin—¹Estimation and a Simple Bed-Side Method for the Same.*

BY WM. KRAUSS, M. D., MEMPHIS, TENN.

Medicine is a progressive art. Progress has its advantages, and one of these is the difficulty the busy practitioner experiences in keeping up with all the advances in the various lines. It therefore becomes the duty of the specialist to act in the capacity of instructor, and our annual gatherings serve as the best fields for such instruction.

Your essayist does not arrogate to himself the office of instructor in a general sense, but in view of a great deal of work done as pathologist of two of our hospitals and instructor in a large medical school, he feels he may add his mite to the annual increase of knowledge.

The examination of the blood, a subject to which your essayist devoted a paper at your last meeting, has been a sealed book to the general practitioner. I come before you to-day with one mode of blood examination which any one can carry out, and, I hope, with as much profit as it has been to me.

In the first place, a hemoglobin estimation is of value in

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judging the extent and severity of a malarial attack by the amount of hemoglobin reduction, and also in judging the effect of our remedial agents by re-examination at weekly intervals. It has been a routine practice with me to test the hemoglobin of every patient in whom an anemia was likely, and it has been found that the physical appearance of the patient was no index of his hemoglobin percentage. In my last paper I called attention to the diagnostic importance of the relation between the corpuscle count and the hemoglobin percentage. A hemoglobin test is diagnostic per se in cases of suspected syphilis in the pre-secondary stage, if used as follows: Make an estimation and then order a mercurial inunction or injection: in twenty-four hours the hemoglobin will have fallen from 10 to 20 per cent; this is positively diagnostic, except, of course, when the patient is already using mercury. Hemoglobin estimation is the only proper means of controlling the dose of mercurials in syphilis; only that dose which is accompanied by a progressive weekly increase in hemoglobin is the scientifically correct one; signs of mercurialization may occur with the smallest doses of mercury and, on the other hand, fatal doses of mercury may produce no salivation. These points have been prominently brought out by Justus, Keyes and others, and are dwelt upon in a very good paper by Drennan, of Hot Springs, and are only repeated here in evidence of the value of hemoglobin examinations.

This brings us to the second part of the title of our paper—"a simple bed-side method." All the colorimetric methods are open to the objection of expensiveness, inaccuracy and limited applicability, and require good color judgment to be even approximately correct. I have experimented at great length with what is known to hematologists as the sp. gr. method and the details of the experiments and calculations which are largely technical will be published in the *Journal of Experimental Science*, since they do not properly belong to a subject on general medicine.

As a result of these experiments I show you this simple instrument, which any one can use: It consists of two mixtures of benzol and chloroform, one equivalent to a 1060 sp. gr. at 80 F., and one to 1000 sp. gr. and colored with gentian violet, apipette graduated in hemoglobin percentages from 110 down to 20. The 110 mark is also equivalent to 5 c. c. which is the quantity of the 1060 sp. gr. fluid to be measured off; we also require a

short wide test tube and an ordinary thermometer. The fluids must be at 80 F., which is the usual room temperature; if this does not correspond a small vessel of water is brought to this degree by adding either ice or tepid water, as the case may be, and the bottles containing test fluids are immersed in this for several minutes, during which time we may be otherwise occupied. I have thus far found no fluids as mobile and as easily obtainable whose rate of temperature expansion is like that of blood, hence this temperature correction is absolutely necessary.

We now proceed as follows: Charge the test tube with 5 c. c. (110 per cent mark) of the clear fluid; cleanse the tip of patient's finger with alcohol and a cloth; puncture with a new steel pen from which one nib has been broken off; allow blood to exude *without pressure* and with a capillary pipette draw up and inject the blood *under the surface* of the solution in test tube. Unless its hemoglobin percentage is over 110, it will float on the solution; next fill the pipette to the 110 mark with the violet solution and introduce it to the bottom of the tube and gradually allow it to flow until the drop of blood begins to recede from the surface; then add more cautiously and interruptedly until the blood floats indifferently in the fluid, *i. e.* neither rises or falls. The percentage of hemoglobin can then be read off from the amount of violet solution used. The test is not applicable in hydremia when the red cells are water-logged, and its readings are lower than the color test readings in fevers.

The apparatus will be marketed by a well known manufacturing house with full directions for its use, and will scarcely cost over \$1.50.

Our Duties as Public Educators.*

H. M. FOLKES, M. D., BILOXI, Miss.

This is a subject of such wide and varied import that to discuss it in all its phases and ramifications would require more time than is at our disposal, hence I will, with your kind permission, touch only upon one of its collaterals, that of yellow fever. From the experience of the past, should come the wisdom of the future, and upon this predicate I will direct your attention along a line of thought suggested by our epidemic of last summer and fall. This outbreak has become classical and has clasped be-

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tween its covers a series of lessons so striking as to forever remain impressed upon the medical mind. Existing for weeks, nay months, before its nature was suspected, it baffled some of the most experienced diagnosticians that the country possesses before it was recognized as the South's greatest foe. The people have always expected great things from the Medical world and with the above facts staring us in the face, I would feel no little diffidence in approaching the subject matter of our topic were it not that I am impelled by a desire to assist in retrieving ourselves from the loss of prestige we have so surely suffered, and to again uplift our profession to the scientific position from which the people will recognize an *ex cathedra* utterance with the deference due to knowledge. Yellow fever possesses within itself more dread to the South than any other disease. This should not be so, and it will be our duty to demonstrate this fact in a way which can not be gainsaid. It is a germ disease and as such is easily and readily destroyed by use of an acid 1-500 bi-chloride solution, formaldehyde, sulphur dioxide or steam under pressure at 212 degrees for thirty minutes. It requires from one to three weeks to establish itself at a place, or in other words, to acquire a virulence sufficient to rapidly become disseminated. It should be remembered also that one or two days sickness in a room does not necessarily infect the room and that even after the third day the patient can be moved and the room be comparatively safe. It is almost entirely taken into the system by the respiratory apparatus, hence measures looking to disinfection of bodily emanations are indicated, and experience proves their effectiveness. The idea that it may be conveyed to a considerable distance by the air is a mistake, as it is extremely doubtful if transmission occurs at more than seventy feet. Yellow fever fomites may be classed as any soft or porous goods, such as clothing, feathers, rotten-wood, etc., and as such is capable of absolute disinfection. Immunity, while not absolute, is practically so, not over 2 per cent. showing a second attack. It is one of the cleanest and most clear cut of clinical diseases. It requires less medicine than almost any malady we treat. It is not so fatal as many are led to believe. The mortality in 1878 being under 19 per cent., it has shown a tendency to become less every outbreak since that time: that at Jacksonville being 10 per cent.; that at Brunswick, 8 per cent.; that this past summer about 8 per cent. The trouble is that people remember those

who have died and fail to make note of the many who recover, and again, different localities may and frequently do, present such a high rate as to forever impress its memory upon the minds of the people. A case of yellow fever can be treated in a room in a crowded hotel and by taking the following sanitary precautions no other guest in the place need become infected: Place over windows a double thickness of mosquito netting or some such material, kept constantly moist with a 1-500 bi-chloride solution. Have rubber sheet next to mattress. Have only the fewest possible things in the room and these to be wiped with bi-chloride solution once daily. All dejecta, spittal, etc., from patient, in same solution. All cups, towels, glasses, etc., to be treated in like manner. Nurse to stay in room or else when going out to take bi-chloride bath, if possible, and put on sterilized clothing all over, her shoes included, unless simply leaving the room for a few minutes, in which case she should take the same precautions as the physician. The physician always to put on a cotton gown wet with same solution before going into room, this to be removed when he comes out, and his hands and face to receive a formaldehyde bath at once. On recovery or death of patient, the room and its contents being thoroughly disinfected will positively prevent a spread of the fever. In event of death, infection can be prevented by having burial attendants wear cotton gowns and gloves wet with the bi-chloride solution. Wrap the body in a sheet wet with the same solution, and then place it in the coffin which should be securely fastened and under no circumstances re-opened. Not more than eight persons going to the funeral, which should take place as soon as possible after death, not later than six hours at any time. While it has not been customary, I believe that, having all persons attending the funeral wear gowns and gloves, as provided for the funeral attendants, would be an additional safeguard. The people are always willing to learn and while it will take time to convince them the day is coming when they will recognize yellow fever as being as completely amenable to measures of isolation, as are small pox, diphtheria, scarlet fever, etc. Every quarantine station in the country is an object lesson which would attain infinitely more value if every case of fever entering it should be reported. This has been objected to by some on the ground of alarming the people. I hold to the contrary, that if the people knew and had opportunity to appreciate the absolute security of

these hygienic out-posts, they would quickly become educated to the necessity of the desired ends in the prevention and handling of yellow fever. By all means let us have reports from all the stations. All these measures, gentlemen, are absolutely valueless unless we can impress upon the minds of the people the fact that "honesty is the best policy."

The above means all look to the prevention of the dissemination of the disease. We will now direct attention to its management should it become epidemic. While a strong advocate of States rights, in health affairs, I must confess to a fascination with the idea of federal handling of epidemics for the following reasons: They have the power of securing uniformity in rules and regulations, the authority in interstate questions, the likelihood of its officers not being swayed by local influences—though this has certain drawbacks—and finally, what to my mind most recommends it, the opportunity to organize a company of immunes properly officered, equipped and drilled, to act as a cordon around infected points. This company should be stationed constantly at some Southern place and should be prepared to march at an hour's notice. Such an organization could be ordered to an infected point, placed on duty at once and could lend invaluable aid in checking the spread of the disease. They should be instructed in all sanitary matters and those not under arms as guards could be of service as sanitary inspectors, nurses, etc., in the afflicted place. Not a wheel should turn in the town, not a person go in or out until this force has arrived by special train. The cordon once placed, then begins the erection of detention camps and granting *pratiques* to clean immunes. This question of immunes is one of the most important with which we have to contend, as it carries with it a responsibility on the part of the health official who issues such certificates, as he thereby certifies to the fact of immunity and in doing so should be absolutely certain as to the correctness of diagnosis in a given case. It is far better to err on the side of safety and refuse such *pratiques* unless indubitable evidence is presented. This should consist of a certificate from attending physician endorsed as correct by one or two health officers who have seen the case with him. These certificates as being of the utmost importance should be issued at the time of illness and carefully preserved by patient for future use. The details of detention camps and their management is of sufficient importance to deserve a special paper, hence

I will only refer to them as being one of the most useful adjuncts we have in the management of epidemics. Uniformity of rules and regulations is so essential to an intelligent handling of an epidemic that it seems hardly necessary to refer to it, yet in our own State the recent law is so modeled as to almost entirely subordinate the authority of the State Board of Health to any little town who may decline to receive persons absolutely non-dangerous. The proper intent of the law based upon modern sanitary and commercial requirements is to afford protection and enable business to proceed. Unfortunately our law largely nullifies the good accomplished at the recent quarantine conference in New Orleans and Atlanta, where were adopted a series of rules and regulations positively accomplishing the two requirements above mentioned—safety and continued commerce. Our future laws should be based upon the lines laid down by the above mentioned conventions. State control of health matters is superior to that of Federal by reason of it being fundamentally constitutional, on account of its officers being of the people and acquainted with their local peculiarities and requirements, of their rather better knowledge of the local surroundings, of their being more subordinate to those from whom they derive their authority, the people, and not having the halo of authority from the government shining around them.

Paper on Yellow Fever.*

S. R. DUNN, GREENVILLE, MISS.

In submitting this paper on the subject of yellow fever, I will not attempt to enter into the minute pathology of the disease farther than to state that the disease is in all probability due to a form of bacillus, termed by Sanderelli bacillus ictoroides, which is spherical in shape, with a segment from which numerous striae extend to the periphery, not altogether unlike a minute pocket compass. The bacilli are easily observed under a lense of moderate magnifying power, cultures of which are easily made or procured in a media consisting of Japanese gelatine and the ordinary boullion at a temperature not less than 90 degrees F.

Yellow fever, in my opinion, is a disease of one paroxysm, though fever may occur after the initiatory fever, under such circumstances it is due to special causes, the disease is ushered in most frequently as an ordinary paroxysm of intermittent

fever, however with more apparent shock and concern. The temperature reaches from $101\frac{1}{2}$ to 104, duration of fever as a rule thirty-six to seventy-two hours, the pulse ranging from seventy-six to 100 beats, never exceeding 110 until late in the disease, when a fatal termination will likely occur. There is almost always severe pain in the head and loins, with more or less gastric disturbance, later on tenderness in the epigastric region and right illiac fossa and a feeling of constriction, extending across the abdomen on a line with the lower margin of the ribs. The eyes are glossy, anxious and suffused with vessels and capillaries of conjunctiva engorged. There is a peculiar expression given to the eyes by the tendency of a two or more hairs in the lashes clinging together. The tongue, while frequently normal in appearance at the outset, you will generally find it unduly red around the edge with a nipple shape point at the tip and material engorgement of the sublingual vessels. The gums, highly congested at the outset, later on become of a brick dust red, spongy and bleed upon pressure. As a rule there is great thirst and restlessness, with anxious expression. When the fever subsides the patient's sleep is much disturbed with dreams, with increased restlessness, the mind often filled with hallucination. The pulse usually becomes slow, ranging between forty and sixty. Albumin, while not always found in the early period of the attack, will be found to exist in at least 90 per cent of the cases. You may not find it by the ordinary means of heating nitric acid, but will find it by zone method. Specific gravity is immaterial, reaction acid bile rarely. There is markedly apparent great sluggishness of the circulation.

TREATMENT.

When the patient is first taken, have him rubbed from head to foot with flesh brush or crash towel until the surface is in a glow. If attack comes on immediately after eating empty stomach by means of mustard, salt and warm water. Give hot mustard foot bath from twenty to twenty-five minutes, taking care to exclude air. Put patient to bed, cover with blankets, give some cathartic, castor oil, compound cathartic pills, calomel and soda are generally preferred. If the case is not in a malarial country I prefer either of the two former, as the calomel and soda will have to be followed in a few hours by some saline. Should the pain in the head and back or both be severe

give from four to five grains of phenacetine, or the same quantity of acetanilide with $\frac{1}{4}$ grain of citrate caffeine, the latter in case the heart's action should be feeble. This may be repeated every two or three hours until the pain ceases and the patient is quiet. Counter irritation in this stage over the lumbar region with mustard or turpentine will prove beneficial. When the temperature becomes normal or nearly so, should the pulse fall below 60, it should be supported by the administration at regular intervals of from 1-16 to 1-30 of a grain of strychnine, or 1-100 of a grain of nitro-glycerin, the latter preferred if the kidneys act scantily. The patient should be supported if signs of debility appear by the occasional administration of either of the following stimulants: whiskey, champagne and wine whey.

The extreme restlessness that usually comes on at this time will be best relieved by dry rubbing over the body and extremities and sponging the face and up and down the spine with soap liniment preferably, or vinegar and water or some sedative lotion, as medicines are to be avoided as much as possible in this stage. The patient should be kept at all times in the recumbent posture until the eighth or ninth day, or even longer if the condition is not good. Perspiration once established should never be checked by the removal of cover or exposure of the hands or lower extremities. I don't mean by this that a patient should be sweated to death. The diet which should not be commenced until the patient has reached the fifth or sixth day of his attack, and not even then if he does not desire it. Hot water tea may be given at any time during the attack; even store tea or sassafras tea are permissible and I think advantageous when they desire it. Should milk be selected it is better given in wine whey or fresh butter-milk ice cold if they desire it.

SPECIAL INSTRUCTIONS.

Black Vomit.—From half to one grain of dry cocaine administered when the stomach first becomes tender or painful will frequently prevent its occurrence. A full dose of calomel, counter irritation over the stomach, are among the preventative means. Cocaine and tincture of iron with mustard plasters or blister, the former greatly preferred, for the relief of black vomit.

Suppression.—Plenty of water by the mouth, by enema, and if necessary, subcutaneously, from one pint and a half to three

pints of normal solution. Dry cups over regions of the kidneys and other counter irritation. Hot fomentation around the loins, flushing the bladder with warm water; enema with glycerine, salt and turpentine. Shall enema pass off repeat with warm water and salt.

Intermittent or Slow Pulse.—Strychnia, hypodermically, alcoholic stimuli by the stomach. Normal solution, subcutaneously; large enemata of warm water.

Intense Nervousness.—Acetanilide grains, four to seven, or phenacetine grains, five. If pulse is slow or weak, caffeine or strychnia should be combined with them. If kidneys are acting well, the nervousness great, 1-16 to 1-8 of a grain of morphine hypodermically will act like a charm. Remember, the kidneys must be acting well when you give it.

Hiccough.—Cocaine by the mouth, strychnia hypodermically and stimulants after fever has subsided. You should avoid the arrest of gentle skin action in this stage, but at the same time you should not induce excessive perspiration. Chilly sensations or rigors at any time during the progress of the disease should have your immediate attention and be arrested by warm application, preferably hot salt in flannel bags laid about the person.

During convalescence two things to be observed—perfect rest and quiet; nourishing diet in a liquid form only, from about the sixth to the eighth or ninth day. Absolutely no company except the nurse and physician. Let the patient sleep all he possibly can. Exclude all noise, look out for sudden changes in temperature and never allow anything to be said to the patient by nurse, physician or any one else, except something cheerful.

A Dislocation of the Astragalus Requiring Removal.*

By J. A. CRISLER, M. D., YAZOO CITY, MISS.

Nothing so imperils the future usefulness of a joint as its complete dislocation.

Viewed from the standpoint of the country surgeon's experience, a compound dislocation of the astragalus is rather a rare occurrence.

The text books on surgery are exceedingly limited in their

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discussions on this highly important luxation, while dislocations in other regions of the body are plainly described and clearly emphasized *ad infinitum*. When we are confronted by a complete separation of the articular surfaces of the tibia and astragalus, with the latter bone thrown partly out of its mortise, with its head actually presenting through the skin and its articular surfaces rotated nearly 90 degs. from their correct positions, the responsibility, as well as the injury, is indeed serious.

The following case is one in which these conditions existed, to-wit: Mr. J. F. L., aged 34, strong, vigorous and a gentleman of high social standing, while returning to his home on horseback about 10 P. M. on March 22, 1896, was violently injured by his horse falling down and upon his right leg and foot. He was carried home by a companion and Dr. R. W. Rowland, of Flora, was summoned to attend him.

The doctor found his injured foot greatly inverted and the astragalus presenting forward and outward with its head resting on the external cuneiform and the skin lacerated directly over it.

The patient was put under chloroform anesthesia, the field of injury rendered aseptic and vigorous efforts made toward reduction, but to no avail.

The foot was then dressed antiseptically and was treated likewise for three days until the great swelling had been much reduced, whereupon similar efforts at reduction were made with like results.

The patient was then told that more radical measures would be necessary to the extent of sacrificing the bone or perchance the foot, but these were ardently declined, he preferring to await some developments that would be proof positive for more active surgical interference.

The doctor then instituted a vigorous fight against sepsis and awaited results. The bone being so far removed from its articulation as to seriously interfere in part with its blood supply, that after a period of four weeks from date of injury it began to show unmistakable evidences of necrosis, whereupon the doctor wired me at Canton to come down prepared to assist him in whatever operation the case demanded.

On April 25 I saw the case with the doctors and we decided to remove the bone in toto, as marked evidences of necrosis of its neck were visible through a slough in the skin that was caused by pressure from its head.

This was done by first making an incision extending from the lower anterior aspect of the tibia, external to the artery and extensor tendons, downward and outward over the external malleolus to the plantar-palmar junction.

A counter incision was then made from the outer malleolus, anteriorly to the slough, over the head of the astragalus.

The flaps were then dissected up and the entire outer malleolus was removed with the bone forceps. The foot was now strongly flexed toward its palmar surface and the greater part of one of the articulating surfaces of the astragalus was now plainly visible, and it was clearly apparent that the upper surface of the astragalus was presenting laterally as if trying to articulate with the outer malleolus, instead of its fellow, the tibia.

Thus it was conclusive that the bone had undergone an outward rotation on its axis of nearly 90 degs. from its correct position. The bone was now enucleated from that part of its mortise that still retained it by severing a few unbroken fibres of the calcaneo-astragaloid ligaments.

These being the only ones now attached to it, the others having been torn asunder when the patient received the injury.

No blood vessels were cut during the operation of sufficient importance to demand ligation, nor was any pus present in or around the mortise.

The os calcis was now drawn up to the lower end of the tibia, where it was henceforth to articulate, and after thorough bi-chloride irrigations the remaining cavity was snugly packed with gauze and allowed to heal by granulation.

The healing process occupied a period of about three months, but was uneventful. After that time the gentleman was able to go about on crutches, which he discarded ten months later, and would have done so earlier but he sustained a fall from his gallery that was covered with ice and partially dislocated his knee cap, which prolonged his inability to walk very much.

He is now able, however, to walk with comparative freedom by the aid of a high heel shoe without crutch or cane, and his ankle motion is about one-half as good as before the injury, with much promise of increased motion and usefulness in the future. The main features, gentlemen, in this case are these:

First—The long retention of this bone, which was without visible nutrition, since its rotation necessarily cut off its blood supply, yet necrosis was not present except in its neck and head.

Secondly--The absence of septic infection in the mortise cavity in the face of lacerated vessels and attachments and this unnourished bone.

Thirdly--The exceeding tolerance of the ankle joint to traumatism and surgical interference.

Phlegmonous Erysipelas Necessitating Castration.*

BY S. A. MAJURE, DICKSON, MISS.

Was called Sunday, August 25th, 1889, at 4:30 p. m., to see Mr. P. M.

History--Formerly in good health; was taken Thursday morning before with a slight chill followed by fever, and at about the same time noticed that penis was a little swollen and keen pains darting through it, and on under side, and just posterior to glans on penis a spot which had the appearance of tick bite and was a little dark or brown hue. This inflammation spread rapidly over the entire penis and surrounding tissue.

Sent for his family physician, who only lived a short distance. Sent a number of times during this period from Thursday morning until Sunday evening, and would get the promise, "I'll be there in a few hours."

On Sunday evening I was sent for, being six miles away. When I arrived I found patient with temperature 105, pulse 120 and very feeble, suffering intense pain with testicles. The inflammation had spread over the entire penis, scrotum and three-fourths of the perineum, had extended to both these and upon the pubis, with tenderness over right and left inguinal region.

Began giving $\frac{1}{2}$ dr. doses of tr. iron with strychnia every three hours; gave opiate to relieve pain; covered the entire affected parts with collodion and laid cotton wool over them. Bowels had been moved by cathartic pills.

Saw patient Monday, August 26th, at 9:30 a. m. Temperature 103, pulse 98, full and strong. Not suffering so severe pain. Inflammation had not spread but little, but parts were swollen very much and had a boggy feeling on pressure. I made a number of incisions from which oozed bloody serum. After making incisions, washed thoroughly with bi-chloride solution and dusted

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with pulv. boracic acid and covered with absorbent cotton. Continued iron and strychnia every four hours with morphine as indicated.

Tuesday, August 27th, 10 a. m.—Quiet, with tenderness on pressure over right and left inguinal regions. Temperature 100, pulse 88. On exposing affected parts saw line of demarkation had formed, and an entire sluffing of affected parts was inevitable. I washed well with carbolic acid and covered with powdered boracic acid and laid oil on with absorbent cotton. I sent for Dr. Norris to meet me Wednesday at 10 a. m., which he did. And upon removing dressing the entire affected integument came away, including scrotum. About one-eighth inch of prepuce just posterior to glans penis and superior surface was left. A number of sinuses of various sizes and shapes were to be seen over the raw surface. Also we found an abscess in each inguinal region between the abdominal muscles with a fistulous opening on either side of symphysis pubis, and under the integument. From abscess we were able to drain about half pint fetid pus by elevating the body and making pressure above. After removing all pus possible, washed out abscess with bi-chloride solution. At this time we saw that castration was inevitable, and notified the man that he would have to undergo the operation. The drainage was very great upon his system. We waited until Thursday, at which time we were convinced that the drain was too great for his already racked constitution. Also testicles were much swollen and dark. We had called in Dr. Lewis, who agreed with us in the operation. Proceeded to perform operation under chloroform. Continued to wash raw surface with carbolic acid and bi-chloride, alternately, and dust with oxid of zinc and pulverized boracic acid, covered with iodoform gauze and absorbent cotton. It required daily dressing at first.

Patient began to show steady improvement from day after operation. Required until about the last of November to heal all the parts over. Patient was a carpenter by trade, and had been shingling a roof Wednesday before he was taken, but said that he had not hurt himself that he knew of. He is to-day a stout man, and labors regularly without any inconveniences.

Should Physicians be Required by Law to Reveal the Secrets of Their Patients.*

BY C. KENDRICK, KENDRICK, MISS.

During the special session of the Legislature of 1898 a bill was introduced by a member of the legal fraternity requiring physicians to report all cases of syphilis to the county health officer. A man may have been cured, as we use the term in such cases, may have married, reared a family, joined the church and forgotten all his youthful folly, yet if symptoms of tertiary syphilis should be discovered by his physician he would, under this bill, be required to report the case. There were nearly a dozen physicians in the Legislature, yet not one of them was consulted, so far as I could learn, as to how the bill should read, or as to the nature of this disease. I notice also that efforts have been made in other States to pass a law of this kind. It is remarkable how many people, representing all classes, from the learned professions to old-maid aunts, feel called on to instruct physicians how to act under all circumstances. Suppose one of the doctors of the Legislature had introduced a bill to require lawyers to report to the grand jury or district attorney all clients guilty of manslaughter, theft, arson or other crime? Every lawyer would have rightly regarded it as a matter which should be looked after by men whose profession enabled them to better judge of such matters than it is possible for a physician to do. Or suppose a bill had been introduced to require a priest or preacher to report the secrets of the confessional? Yet these matters are of far greater interest and importance to the people than the secrets of a patient. If there had not been physicians in the Legislature the bill might have passed. It might have caused litigation and given a few cheap lawyers a \$5 or \$10 case occasionally, but it could not be enforced, and a law that can not be enforced is nothing but a "roaring farce." There are very few physicians who would not violate an absurd law rather than betray the most sacred confidence. It was a military court acting under the most extraordinary circumstances that condemned Dr. Samuel A. Mudd to life imprisonment because he did not betray John Wilkes Booth after he had dressed his broken leg. So far as I know no civil court has ever punished a physician for keeping a professional secret. But should such an effort be made let us hope that a large majority of our noble

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profession will be true like Dr. Mudd and wear the galling chain of the dungeon rather than betray the most sacred obligation. Not knowing what efforts may be made in future I have thought it proper to call attention to this matter in order that members of the medical profession may take such action as a body or as individuals as may seem proper to prevent vicious innovations of this character.

Endometritis—Some of Its Causes, Results and Treatment.*

BY J. T. B. BERRY, M. D., BRANDON, MISS.

This is one of the most important diseases which we, as general practitioners, are called upon to treat. Important because of its frequency—the variety of causes which produce it, some of the dire results that follow it, and the varied treatments required for its relief.

PREDISPOSING CAUSES.—Our so-called civilization has for ages past been slowly but surely and effectually preparing the mothers of the present and of future generations for the easy and inevitable development of disease.

Young girls are put in school and encouraged by every possible means until their nervous systems are stimulated and developed far in excess of their natural growth and physical development. This nervous tension is kept up during her school days without relaxation. And after she is out of school the demands of society are no more conducive to physical development, vigor, strength and health.

In this continued nerve stimulation and tension, that normal relation which should exist between the nervous system and the vascular system is to some degree destroyed. The nervous system no longer controls the blood supply to different organs to that degree of perfection intended by nature and accomplished in a normal condition.

The disturbance of the equilibrium of the circulation already begun is greatly aggravated by the modern dress of girls and young women. Her waist is subjected to a process of compression until her form resembles an hour glass.

This compression crowds the thoracic organs upward and together, interfering with the full expansion of the lungs and

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consequently the perfect aeration of the blood and embarrasses somewhat the action of the heart.

It forces the abdominal viscera downward against the pelvic organs, interfering seriously with the venous circulation, resulting in engorgement of these organs, which brings about a permanent dilatation of the veins and weakening of their walls—a condition most favorable for the development of inflammatory processes.

The uterus is a cone or pear-shaped body placed in the pelvis with the base pointing upward and forward. It is supported partly by the other organs of the pelvis but chiefly by being suspended by ligaments attached to it, with the other ends attached to sides of pelvis, to bladder and to rectum. It is encased in a network of blood vessels which are very tortuous and easily dilated. Pressure from above caused by tight clothes displaces the organ and obstructs the circulation of its vessels. Right here often begins the first stages of an endometritis. Habitual constipation aggravates this trouble to a decided degree.

Inherited or contracted diseases, as phthisis, syphilis, rheumatism, etc., which tend to lower or impair the general health, also predispose to the development of this ailment.

Some of the exciting causes are exposure to wet and cold during the menstrual period, venereal excesses, much standing on feet and long walks during menstruation, the employing of mechanical means to prevent conception, abortion, detained portions of membranes, improper use of pessaries, the introduction of septic matter by means of unclean instruments, the vaginal douche and the hands of the midwife; lacerations, intra-uterine and intra-mural growths, self abuse, specific infection, etc., etc.

RESULTS.—An endometritis if suffered to continue will in time cause a metritis. The uterus enlarges and by its own weight aggravates any malposition which may already have existed. Adhesions may form, rendering replacement of the organ difficult.

The inflammatory process may extend from the uterine cavity to the tubes and ovaries. This is especially liable to occur in septic and specific infection. In fact it is doubtful whether a salpingitis or ovaritis has any other origin—certainly a pyosalpinx has no other. Sterility is a frequent result of the disease. A large per cent. of cases of sterility being due to this cause. Various nervous phenomena are sometimes caused by the dis-

ease, probably through reflex nerve action—such as insomnia, irritable disposition, pains referred to various parts of the body, hysteria, etc.

These nervous disturbances are usually aggravated about the menstrual period or may be present only at that time.

TREATMENT.—During the past year or two, various new remedial agents have been recommended, some of them highly lauded in the treatment of this disorder. There is no specific agent, however, applicable to all cases; and he who relies upon the routine administration or application of any one remedy is doomed to frequent disappointment.

The treatment should be general and special. By general treatment we mean the employment of such measures as aid in improving the general health and condition of the patient. Tight clothing and bands around the waist should be dispensed with. Constipation should be relieved. The digestion should be looked after. Such medicines should be administered internally as each individual case requires. Most chronic cases require some of the bitter tonics, together with iron, arsenic, etc. Acute cases sometimes require the opposite course.

By special treatment is meant the more direct application of measures and medicines to the disease. In acute and sometimes in sub-acute cases it is best to keep the patient in bed for a while—maybe two weeks, maybe six weeks—as each case may require. A lacerated perineum or cervix should be repaired and any malposition corrected; the hot vaginal douche used two or three times daily.

The uterine cavity should be washed out three or four times a week—using some medicated wash as hot as can be comfortably borne—solutions of carbolic acid, tincture of iodine or nitrate of silver. The latter is especially useful in cases due to specific infection. Of course water and instruments should be sterilized. The application of such remedies as Churchill's tinct. iodine, full strength; carb. ac. and strong solutions of silver nit., are sometimes beneficial, but should always be made with care. The cervix should be dilated and the uterine cavity thoroughly washed out, before and after the application, with sterilized water. This treatment is not void of danger. It is frequently followed by great pain, probably due to an escape of some of the fluid in the tube.

There are those who claim a great deal for electricity in the

treatment of this disorder. My experience with that agent is too limited to be of any value, but my opinion is that any good results obtained from its use are due more to its general tonic effect than to any local effect it would have upon the disease.

Most cases will yield to the above plan of treatment if faithfully carried out. Some, however, will not. In such, if there be no contra-indication, the curette may be used. I must admit, though, that I am rather conservative in using this instrument. That it is useful and capable of accomplishing good in certain cases, no one will deny. On the other hand, that it is dangerous and capable of doing harm, can not be denied. Even in the hands of the most skillful operators, its use has been followed by bad results.

Correspondence.

TO THE MEDICAL PROFESSION.

It has been intimated that maliciously disposed dealers when interviewing the Medical Profession have stated that Gude's Pepto-Mangan is placarded on walls, fences, etc. The intention of such an assertion is evident, and is false in every particular.

There is a Sign Advertising Co. in this city whose line of work is in that direction, being of the same name "Gude" they place their name in bold letters and a passing glance might create the impression that Gude's Pepto-Mangan was being so advertised. This is positively not so.

We have been before the medical profession of this country for upwards of seven years and have endeavored to conduct our business in the highest ethical manner. The following clause in our contract with Dr. A. Gude & Co., Chemists, Leipsig, covers the ground thoroughly:

Section 9. And it is further agreed between Dr. A. Gude & Co., party of the first part, and the M. J. Breitenbach Co., party of the second part, that if at any time the said M. J. Breitenbach Co. should by device or by advertising at any time attempt to increase their business in Gude's Pepto-Mangan other than through the recognized channels to the Medical Profession then in such event this contract is to become null and void and all rights of the M. J. Breitenbach Co. existing under this instrument immediately become the property of said Dr. A. Gude & Co. without recourse to law.

Respectfully,

M. J. BREITENBACH & Co.,
New York City.

Editorial.

J. R. TACKETT, M. D., BILOXI, MISSISSIPPI

Editor and Business Manager.

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SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

W. G. KIGER, M. D., President Brunswick
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DR. TACKETT.

Imbued with principles of the highest patriotism, Dr. Tackett has laid aside the pen for the sword, or, more literally, for the scalpel, having been appointed an acting assistant surgeon in the United States army.

Among the very first to tender his services to the State of Mississippi, this cultured gentleman, whose eyes had seen and whose heart had bled at sight of suffering in battle-scarred Cuba,

was overlooked by his own State and it remained for the United States government to call upon him to make the sacrifice which comes when duty is to be done.

In his much regretted absence it devolves upon me, for the present at least, to take up his work. This I will do to the best of my ability and I crave indulgence of our readers until return of the fighting editor.

Respectfully,

H. M. FOLKES.

* * *

THE State Board of Health has very wisely advised a general vaccination owing to the prevalence of smallpox in this and adjacent States.

The profession should aid the board in this matter and urge upon their clients the necessity for this measure.

* * *

A CUSTOM prevails in some of the Western States which in its way is a good one, it being that an accoucher is not entitled to his fee until he shall have vaccinated the baby.

* * *

IN the handling of epidemic diseases, nothing so inspires the people with confidence in the ability of the profession to manage it, as early and prompt diagnosis.

If our medical colleges can just teach this one thing to their students they will have made epidemics a thing of the past.

* * *

NOT alone is the question of health involved, but it is a matter of interest to the tax-payer, as every unrecognized case of spreading disease is a focus of infection to which may be traced case after case, thus producing an extra expense for which the taxed are called on to contribute.

* * *

THE present outbreak of smallpox in this State is absolutely inexcusable. The board has been urging for months past that the people vaccinate, attention has been repeatedly called to the existence of the disease on our borders, and yet we see place after place where the scourge is permitted to get a foothold under the plea of non-recognition. The only excuse of which is a *nil*, or comparatively so, mortality.

Public Health.

Our State is woefully behind in some things. Now we have been drifting along year after year without having a correct account of vital and mortuary statistics, with no knowledge of the true sanitary status of our State, except such as some zealous student has from time to time compiled in his own neighborhood. In fact the whole method has been so loose that the Insurance Companies have at times been compelled to send and have it done for themselves. Under the department of Public Health Law, which Dr. Kiger so cleverly got passed, there is ample provision for the collection of these very facts. It is much to be hoped that the Doctor will soon have everything running along in ship shape. This law also provides for the appointment of county boards of health and in this one particular is of immense value, as each board has opportunity to become a factor for good in its locality.

It affords us pleasure to state that the coast is free of even a semblance of suspicious sickness.

It is safe to affirm that no perfectly satisfactory method for all times and all places has yet been devised. — *Carpenter, Garbage Disposal, in May Sanitarian.*

The death rate among plumbers from Bright's phthisis, cancer and bronchitis is in excess of the average: from lead poisoning the mortality figure is placed at 19.

In these modern days of Boards of Health, it ill-becomes a place posing as a health resort to permit the uninterrupted series of vile odors which so plentifully besprinkle some of our coast towns. The local boards have immense opportunities before them in educating the people of their towns in the first principles of sanitation. Sewerage is an expensive thing to be sure, yet there are other methods for the disposal of night soil not so expensive, but still effective. Would it not be a good idea for the city board to have an open meeting to which the representative men of the town should be invited and at which time the various methods could be discussed.

Abstracts and Extracts.

SOME EXAMPLES OF INCOMPATIBILITY.—The fact that many alkaloids and similar substances frequently give physiologic results different from those expected, suggested to the *Ztsch. f. Krankenfl.*, a discussion of these conditions, including a consideration of those subject to deterioration and molecular rearrangement and those subject to deterioration during the process of preparation. As examples are mentioned the admixture of silver salts and organic matters; of salicylates with vegetable or mineral acids; sterilization of morphin and cocain solutions. Ointments are frequently entirely inactive, when containing metallic salts in addition to a salt of morphin or cocain, as the alkaloids are always rendered insoluble by a slight excess of metallic salts. Simultaneous external and internal use of certain medications may also exert a disturbing influence on their action. If, for example, an oculist prescribes an ointment containing mercury and the patient takes potassium iodid internally, there will be a formation of mercuric iodid in the eyes which considerably increases their inflammation. Quinin is not infrequently prescribed with substances containing tannin, an insoluble tannate of quinin being the result. Quinin is also slowly precipitated by potassium bromid. In the cases of iodin and bromin the reactions with quinin are not always simple, but at times these bodies enter directly into the molecule and change not only the structure, but also the physiologic properties and are liable to change it even into toxic bodies. During the sterilization of morphin solutions there is a liability, especially when the temperature is too high, of forming apomorphin, an alkaloid of totally different therapeutic action. A similar change may take place under like condition in the sterilization of cocain solutions. —*Ph. Post, in Pharmaceutical Era.*

There are no well-authenticated cases on record, I believe, where vaccino syphilis has occurred in children over eight months of age. This is a point which, I believe, is not generally known or understood; so by all means it would be safe to conclude that in hereditary syphilis it is no longer transmissible after the child is one year of age.—*Ibid.*

My belief, however, is that as time progresses, the disease loses its virulency, and at the expiration of five or seven years it has practically lost its contagiousness, with here and there a few fingle exceptions.—*Drennen, Syphilis and Marriage.*

The laity, as well as the profession, is waking up to the contagiousness of this disease, and in the judgment of our some of our best thinkers, there will soon be a pronounced recognizable reaction in the number of the tubercular: indeed, a perceptible reaction has already begun, as is observed from an editorial in the Journal of the American Medical Association of February 26th, 1898, where the statistics from twenty of our principle cities, having a population of seven million and five hundred thousand, have shown a decrease of the tubercular death rate of thirty-three per cent. since 1888 which is tersely ascribed to a more general knowledge of the contagiousness of the disease, better food supply and more perfect sanitation.—*Burroughs, Prevention of Tuberculosis.*

The uric acid diathesis frequently manifests itself in disease of the sensitive and vascular tunics of the eye. It often does so when no other symptoms of its presence have been detected. Three agencies are at work in the production of the trouble—the *materies morbi*, the increased blood pressure and the final angiosclerosis. The cases originating in the iris and the ciliary region are apt to merge into disseminated choroiditis and to terminate in blindness. The disease originating in the macular region of the choroid or retina finally destroys central vision and is often followed by cataract or vitreous degeneration. The influence of lithaemia is often exerted without producing easily recognizable lesions, in which case its results may be inverse astigmatism, glaucoma or cataract.—*Tennant, Uric Acid in Causation of Retinal and Choroidal Disease.*

In formaldehyde disinfection, dryness of air in room is essential.—*Goler, Sanitarian.*

Medical News and Miscellany.

FOR SALE IN MISSISSIPPI.—A two thousand dollar practice, seven room residence, all necessary outbuildings, a well of good water, 6 acres of land attached, in a growing railroad town with good church and school facilities. Address this office.

Preventive medicine is destined to be the sheet anchor in future medical work, and in line with this the preceding paragraph is decidedly apropos.

The governor has appointed Dr. R. L. Turner, of Ellisville, surgeon of the First Regiment, with Drs. E. H. Kittrell, of Winona, and H. L. Bauer, of Jackson, as assistants.

Dr. M. W. Hamilton, of Goodman, has received the appointment of surgeon to the Second Regiment. The assistants have not as yet been announced.

Uncle Sam has taken to himself the following gentlemen from this State as acting assistant surgeons: Drs. Tackett, of Biloxi; Bragg, of Ocean Springs; McHenry, of McHenry, and Tabor of Bay St. Louis, all of whom are yellow fever immunes.

The Institute of Hygiene, recently held at Opelousas, La., was a most notable step in advance. A similar organization should be effected in our own State and should include among its members all who are interested in modern scientific research and progress. Such membership would have a tendency to broaden the scope of the work and raise us doctor men out of beaten paths.

The following gentlemen and lady passed a successful examination before the board on May 10th: Drs. Louis H. Hightower, Leflore; W. M. Gibson, Daniel; J. T. McLean, Carrollton; J. W. Ringgold, Susie; A. W. McDonald, Durant; R. D. Williamson, Revive; H. N. Blum, Baton Rouge; W. W. W. W. Smithson, Kosciusko; H. L. Bauer, Jackson; L. L. Abbot, New Orleans; J. C. McNair, Brookhaven; E. L. Robertson, Hazlehurst; R. J. Applewhite, Brookhaven; J. N. Lucas,

French Camp; L. W. Crigler, Crawford; I. D. Benson, Anguilla; B. B. Martin, Vicksburg; T. D. Stennis, De Kalb; R. A. Quin, McComb City; J. G. Lilly, Chesterville; T. B. Holloman, Jr., Natchez; I. L. Parsons, Brookhaven; W. W. Broyles, Lackie; C. Champenois, Perkinston; M. W. P. Pool, Edwards; H. L. Noel, Lexington; S. B. Flynt, Greenbrier; W. E. Noblin, Edwards; G. V. Ellis, Akron, Ia.; W. W. Davis, Brookhaven; M. M. McMillan, Boonville; H. M. Klingman, Bolton; L. C. Teemster, Nettleton; Moore Moore, Jr., Memphis; A. L. Monroe, Decatur; R. C. Baines, Vaiden; E. H. Kitrell, Winona; W. C. Clark, Pea Ridge; W. M. Turnage, Kosciusko; J. R. Lockhart, Westville; J. A. Donaldson, Pontotoc; W. D. Beacham, Holmesville; H. D. Glass, Durant; Frank Ferrell, Jr., Ashland; E. A. Denson, Guitano; May Farinholt Jones, Columbus; W. B. Pierce, Vicksburg; E. A. Riggs, New Orleans; J. M. Anderson, Sardis; C. C. Bass, Carley; C. P. Hamilton, Ackerman; J. N. White, Toccoola; R. D. Williams, Love Station; O. C. Austin, Oak Ridge; J. H. Sweanny, Durant; H. G. McCormick, Laurel; E. N. Moore, Edwards; J. D. Biles, Water Valley; B. P. Baugh, Polkville; S. A. Eggleston, Carrollton; A. H. Foster, Jr., Natchez; G. E. Garvin, Chicora; R. A. Anderson, Love Station; A. L. Levy, Philip; M. C. Reeves, Natchez; S. D. Redmond, Jackson; W. E. Terry, Lake Como; H. S. Goodman, Carey; J. H. Stennis, Mathiston; E. B. Heffron, Greenwood.

Dr. C. A. Sheely, of Perkinston, has been appointed acting assistant surgeon in the Marine Hospital Service, and has been stationed as inspector at the west end of Ship Island. With this vigilant sentinel added to the already painstaking corps the Gulf Quarantine Station bids fair to lose some of its old-time dread.

The *Solace* has already been of service in action, having received the wounded from the *New York* after the bombardment of San Juan de Porto Rico by Admiral Sampson, May 12, 1898. In case of an early meeting of the American fleet and the Spanish squadron in Cuban waters, as is anticipated at this writing, it is probable that the *Solace* will convey the wounded with all possible haste to New York instead of to Key West. In anticipation of the *Solace* coming to New York, where the hospital facilities are so much superior to those at

ports further south, elaborate arrangements have been made for receiving the wounded and caring for them. If Sampson is as fortunate as Dewey was in the matter of casualties, which can scarcely be possible, the Solace will not return to port but will continue to cruise with the squadron.

The organization of a hospital corps for the army of invasion is, according to Washington dispatches of recent date, well under way and may be outlined as follows: It will be divided into regimental detachments, ambulance companies, field hospitals, lines of communication hospitals, base hospitals, hospital transports and railway trains, and general hospitals already established in the United States. The last two will be under the immediate direction of the Surgeon General in Washington, and the first five will be in charge of Col. Greenleaf, Assistant Surgeon General, attached to the staff of Gen. Miles. Men who are wounded in action will be cared for by those divisions in the order of their numbering, the slightly wounded and the sick being discharged from the field hospitals if their injuries or sicknesses are slight and they are capable of quickly returning to duty. Those whose condition is more serious will be transported—carried through the lines of communication hospitals, if necessary—to the base hospitals, and only the bad cases who are unfitted for further active service will be sent in the hospital transports and especially fitted railway trains to the general hospitals in the United States. About 180 medical officers, 60 surgeons and 120 assistant surgeons will accompany the invading army, the ratio being 1 medical officer to about 400 soldiers of the line. The medical service will also include about 160 hospital stewards and acting stewards and about 1200 private soldiers. In addition to the usual equipment of stretchers 150 ambulances of the most modern design will be used, 100 of which are already with the troops and the remaining 50 were ordered shipped from Indiana to Tampa a few days ago. Not more than one-third of the entire sanitary organization will accompany the first force of regulars that lands in Cuba, the remainder following with the volunteers.—*Buffalo Medical Journal*.

A RELIABLE FOOD.—Imperial Granum has won the confidence of physicians because many years of clinical experience

have proved it to be a form of nourishment that is acceptable to the palate and to the most delicate digestion at all periods of life. It is successful, not only as an ailment for children, but its rare nutritive excellence in inanition due to mal-assimilation, chronic, gastric and enteric diseases, has been incontestably proven; often in instances of consultation over patients whose digestive organs were reduced to such a low and sensitive condition that the Imperial Granum was the only nourishment the stomach would tolerate, when life seemed depending on its retention.

THE PROPER TREATMENT OF HEADACHES.—J. Stewart Norwell, M. B., C. M., B. Sc., House Surgeon in Royal Infirmary, Edinburgh, Scotland, in an original article written especially for *Medical Reprints*, London, Eng., reports a number of cases of headache successfully treated, and terminates his article in the following language:

“One could multiply similar cases, but these will suffice to illustrate the effects of Antikamnia in the treatment of various headaches, and to warrant the following conclusions I have reached with regard to its use, viz:

- (a) It is a specific for almost every kind of headache.
- (b) It acts with wonderful rapidity.
- (c) The dosage is small.
- (d) The dangerous after-effects so commonly attendant on the use of many other analgesics are entirely absent.
- (e) It can therefore be safely put into the hands of patients for use without personal supervision.
- (f) It can be very easily taken, being practically tasteless.”

OLD REMEDY—NEW USES.—There are very many important uses for antikamnia of which physicians as a rule may be uninformed. A five gram Antikamnia Tablet prescribed for patients before starting on an outing, and this includes tourists, picnickers, bicyclers and, in fact, anybody who is out in the sun and air all day, will entirely prevent that demoralizing headache which frequently mars the pleasure of such an occasion. This applies equally to women on shopping tours, and especially to those who invariably come home cross and out of sorts, with a wretched “sightseer’s headache.” The nervous headache and irritable condition of the busy business man is prevented by the

timely use of a ten-grain dose. Every bicycle rider, after a hard run, should be advised a bath and a good rub down, and two five-grain Antikamnia Tablets on going to bed. In the morning he will awake minus the usual muscular pains, aches and soreness. As a preventive of the above conditions, Antikamnia is a wonder, a charming wonder and one trial is enough to convince.

IMPERIAL GRANUM is a prepared food that makes friend wherever its merits become known. The writer has been familiar with it for years, and takes pleasure in relating the following clinical test of its merits: "The patient, reduced by disease and from the effect of the anodynes necessarily given to alleviate her sufferings, developed malignant cholera-morbus, and for days lay in an almost unconscious condition. As a last resort she was taken to a Boston hospital, where the physicians began administering Imperial Granum, prepared as directed for acute cases, in very small quantities. After several trials it was retained, and the strength and quantity was slowly increased. After four weeks' treatment taking Imperial Granum only for nourishment, she was discharged from the hospital, and a few weeks later endured a severe surgical operation from which she completely recovered, and to day seems in perfect health.

Necrology.

Dr. James Lee Owen was born in Austin, Tunica County, Miss., on January 3, 1866. Both father and mother having died while he was only a few years old, kind providence placed him in the keeping of his uncle and aunt, Captain and Mrs. Jno. H. Jurnagin, then of Terrene, Bolivar County, Miss. He received his literary education at Culleoka and McKenzie, Tenn. In 1887 he began the study of medicine and in October of that year entered Tulane University and graduated in 1889.

His first practice was done in co-partnership with the writer in May, 1889, and during that year an attachment was formed between us which was uninterrupted to the hour of his death, which occurred November 29, 1897. In 1890 he was located on Egypt Ridge, Bolivar County, and in 1891 formed a co-partnership with Dr. J. E. Holbert, at Mound Landing, and the latter having died in 1892 Dr. Owen continued at that place until his death.

His wife, who was Miss Katie McGehee, of Jackson, and one son, survive him. He was a member of the Presbyterian Church.

Being of a kind, generous and sympathetic nature he could not resist the calls of distress, even when his own well-being should have been considered, and it was this neglect of his own health which caused his death.

Dr. Owen was greatly beloved by all who knew him well and his noble character shone out conspicuously among men. By nature and early training in one of the most refined households in the land, he was a gentleman in every sense and the ethics of our profession came to him as naturally as the air he breathed.

The Journal

.....of the.....

Mississippi State Medical Association.

VOL. II.

JULY, 1898.

No. 4.

Original Articles.

Appendicitis.—Report of Three Cases.*

BY DRS. GILLEYLEN AND LUSE, DOVER, MISS.

Case I. On Sunday, October 8, 1896, Dr. S. D. Luse was called, by Dr. T. B. Alsop, to see E. S., white male, aged 9 years, who gave history as follows: While picking cotton on Friday, ten days prior to this, was taken with severe cramp colic. The mother gave some domestic remedies and patient got apparently better. He continued, however, to suffer with slight pain in lower abdomen until Wednesday, October 4th, when Dr. Alsop was called and found him again suffering with cramp colic. He was given an anodyne, calomel and castor oil. Bowels were well evacuated, and on the following day patient was found again apparently better. On Saturday, October 7th, patient rode four miles to mill, and was again taken with his cramp colic and had to be carried home. Dr. Alsop was resummoned and found severe pain in right iliac region with marked tenderness and distention. He made diagnosis of appendicitis and called Dr. S. D. Luse; who saw patient at 4 p. m., October 8th, with pulse 130, temperature 103, and above symptoms. An operation was advised, but, it being fifteen miles from Dr. L.'s office, an immediate operation was impossible. Dr. L. returned

*Read before the Mississippi State Medical Association, April, 1898.

the following morning, and, with Drs. Alsop, J. N. Luse and H. Y. Swayze, operated with a pulse 135, temperature 103½ and profuse sweat. Opening was made at McBurney's point. Found inflammatory bands and general adhesions of intestines. He carefully broke up these adhesions. While searching for the appendix he found the cæcum adhered to the abdominal wall just above and to the right of McBurney's point. In breaking up this adhesion he entered an abscess containing about a pint of very offensive pus, also a lump of hard fecal matter containing grape seed. He irrigated and packed cavity with plain gauze, stitched the wound with silk-worm gut and dressed with iodoform gauze. Patient rallied: At 12 m. temperature 101½, pulse 100; at 4 p. m. temperature 101, pulse 90; at 10 p. m. temperature 100, pulse weaker; gave 1-120 gr. strychnia hypodermically. At 6 a. m. temperature 99, pulse 90; gave milk and gradually increased nourishment which was well taken; irrigated and dressed once daily. On Wednesday morning, October 11th, while irrigating, the appendix floated out in such a state of decomposition as to be scarcely recognizable. Patient continued to improve; temperature never rose above 99 degrees, pulse 98. On 12th day patient was moved fifteen miles to Dr. Luse's residence where he could give him proper attention. He continued to improve and sat up at end of 4th week. Discharged at end of 6th week well, and has been in good health since.

Case II. On March 12th, 1898, I was called to see V. R., male, age 32, colored. Found severe pain in bowels with localized tenderness over appendix, but no detectable dullness. Temperature 102, pulse 100, respiration 25; had been suffering with constipation; kidneys in good condition. I suspected appendicitis. Gave large doses of calomel, quinine and morphine. Directed hot applications to bowels during night. The following day I returned and found bowels had acted well, and pain had subsided to some extent; other symptoms unchanged. I kept up treatment and returned next day, 14th, with Dr. S. D. Luse, prepared to operate for appendicitis. Found patient comfortable; temperature 99½, pulse 86, pain almost absent. Bowels had acted well and a quantity of pus had been discharged. We decided the sack had ruptured into alimentary canal and passed off the natural way, and expected a rapid recovery of patient. We declined to operate and left patient on liquid diet and small doses of bi-sulphate quinine. On following day, 15th, we were

summoned to find patient in dying condition—temperature 104, pulse uncountable and in semi-comotose condition. Patient died about 1 o'clock that night. We attributed death to a rupture both in alimentory canal and peritoneal cavity; the latter of which produced an acute peritonitis and caused death.

Case III. On March 13, 1898, I was called to see J. R., male, age 17, white. Being otherwise engaged, I asked Dr. S. D. Luse to make the call for me. On his arrival he found patient suffering intense pain over entire region of abdomen. He obtained following history: Patient had been complaining the entire week prior to this visit; had suffered with colic; bowels had acted only once during the week, on Wednesday; the action was hard and scant; there was suppression of urine, kidneys had not acted since Friday, 11th. Doctor L. introduced catheter and drew about one-half ounce of urine. He gave large dose calomel and hyperdermic morphine and came home. He related the above history to me and assured me that we had a case of appendicitis and must go back to see him at once. We found patient with temperature 102, pulse 100, and intermitting about every five strokes. Tympanites over entire bowels with pain especially severe on pressure over region of appendix, vomiting a dark brownish, biliary fluid at intervals of about fifteen or twenty minutes without any effort at all. The distention was so great that we failed to get dullness over appendix. We introduced metallic catheter and drew a very small quantity of urine; gave large and repeated enemas of warm water and soap, only getting a small quantity of hard fecal matter; gave large dose of calomel and podophyllin and left dose to be given in two hours; left patient on morphine, strychnine and quinine; directed use of hot turpentine stupes, and a large dose castor oil after six hours. We returned the following morning to find patient in more critical condition. No result from treatment, except action from bladder and diminution of tympanites, which enabled us to find complete dullness over appendix. We found temperature $103\frac{1}{2}$, pulse 120, intermitting about every 8 or 10 beats. We decided to operate as quick as preparations could be made. We telephoned Dr. H. Y. Swayze, and operated at 5 o'clock p. m., the 13th. The incision was made at McBurney's point, and as soon as the peritoneal cavity was entered a very offensive seropurulent fluid began making its escape. There were general adhesions throughout cavity. The appen-

dix was easily found with a large perforation into the peritoneal cavity, and containing the kernel of a common peanut and an acorn shaped calcareous formation or fœcal concretion. The appendix was removed, several pus cavities emptied, adhesions broken up, cavity irrigated and packed with plain gauze, wound closed, leaving opening for drainage and dressed with iodoform gauze. Patient rallied well from operation; temperature dropped to 98, pulse 96, with one or two intermissions per minute. Patient remained in this condition through the night; was somewhat restless and slept very little; kidneys acted well. On following morning, there having been no action from bowels, we gave large enema of warm water with turpentine, without result. We irrigated cavity and dressed as before. Pulse grew more rapid, eructations of that billious fluid returned and temperature gradually rose to 103. We telephoned Dr. Swayze and reopened the cavity with a view of removing whatever obstruction was there, which was killing our patient. We placed patient under ether and entered cavity per same opening, and found extensive adhesions all through the bowels, also gangrenous spots along the colon. We removed this condition as best we could, irrigated and packed as before. Patient came from under the anæsthetic and regained consciousness, but we were still unable to get an action from bowels and patient went gradually down until ten o'clock the following morning, Wednesday, when he died.

Conclusion. In first case we claim operation saved life, although performed as last resort and under the most unfavorable circumstances—in a crowded hut in the lap of poverty. In the second case, we believe that if we had operated when we went prepared to do so patient would have recovered. In third case, if patient had been seen earlier and operation done before rupture, or even at time of rupture of appendix, recovery would have been almost certain.

Object of Paper. Our chief object in reporting the above cases is to attempt to impress upon every doctor, and especially every country doctor, the importance of being prepared to do an abdominal section, when these cases come under our care. We claim that appendicitis is a typical example of emergency work. When we find it, if an operation is indicated at all, it is at once. We have no time to move our patient to a hospital or

sanitarium. The question with us now is, Should we not always do an early appendicectomy?

Dermatitis Herpetiformis.*

BY H. N. STREET, M. D., GLOSTER, MISS.

Dermatitis herpetiformis was first designated as a separate and distinct disease by Dr. Duhring, in 1894. Hebra had previously described one form of the disease, viz: Impetigo herpetiformis, which Duhring afterwards determined to be a severe pustular form of dermatitis herpetiformis. Herpes circinatus bullosus, herpes chronicus, pemphigus puriginosus, pemphigus circinatus, herpes phlytenodes and herpes gestationis are likewise considered varieties of the same general process.

Etiology: The positive cause of this disease is as yet not fully known. It seems to depend upon a variety of pathological conditions, but without any distinct, constant or characteristic relation to one definite process. The case that came under my observation was undoubtedly due to septicæmia, as a result of vaccination. Septicæmia will, in my humble opinion, some day be considered the prime cause. Drs. Sherwell and Bulkley have each reported a case due in their opinion to this cause. One of these cases occurred during gestation and the other was, after death, found to have internal sarcomas.

Symptoms: "In no other skin affection are such varied combinations met with," says Dr. Morrow. This in my limited experience was amply verified. Dr. Duhring also claims polymorphism as one of the characteristics of the disease. In my case I found such a multiformity of lesions that for quite a while I was unable to arrive at a satisfactory diagnosis. While it is distinctly an herpetic disease, yet in no case will you find herpes alone. This is especially the case in the latter stages of the disease. I have never seen any secondary lesions but they do sometimes occur. To illustrate the multiformity of the lesions I will append a short history of the case that came under my observation:

Miss R. T., age 20; family history good. Patient previous to attack enjoyed excellent health, and had, in fact, never had

*Read before the Mississippi State Medical Association, April, 1898.

any serious malady. During the latter part of April, 1896, she was vaccinated by her family physician. At this time she was teaching a small school two miles from her home in the country. This necessitated more or less exposure to inclement weather while suffering from the effects of the vaccination. The vaccination was not out of the usual course except that it produced a rather large ulcer on the arm which healed later without much trouble. When her next menstrual period came around the flow failed to make its hitherto regular and normal appearance. About this time she noticed a small crop of vesicles on her foot. These began to itch and rapidly spread to her legs and later to the entire lower limbs, arms, chest and back, with scattered patches on the pelvis and abdomen. As the eruption gradually extended her sufferings increased until finally they became almost unbearable. Her physician did all he knew to do, but to no avail. Consultations were had with physicians of long experience who pronounced it "red eczema" and various other things. I was called to see the patient on July 1st. I found the patient sitting up, but with quick feeble pulse and other evidences of an exhaustive disease. The arms and lower limbs seemed to be the principal seat of the eruption, especially their extensor surfaces. I found in the eruption papules, small and large vesicles and even an occasional bleb, also some pustules. These were arranged in well defined semi-circles. The patient stated that during the day she rested in a measure comfortable, but as soon as night made its appearance the burning, itching, tingling, and a sense of something crawling beneath the skin would appear, all of which would increase in severity as the night grew older until her sufferings were all but unbearable. The poor creature would scream with agony, tearing and lacerating her flesh in the vain endeavor to remove the imaginary insects crawling on the skin, at the same time begging for something to cool her arms and limbs, saying that they felt as though they were roasting in a hot bed of burning embers. With the exception of a few relapses of short duration these horrible sufferings gradually lessened in their intensity under the influence of vigorous and persistent treatment and the patient finally made a complete recovery. It has now been two years since the attack and so far no symptoms of a return have manifested themselves.

I consider the terrible burning, itching and crawling in

connection with the distinct and, in my opinion, characteristic mixture of lesions, with a preponderance of vesicles, sufficient to make a diagnosis. The only diseases that are likely to be confounded with it are erythema multiforme and pemphigus, but the co-existence of other diseases with dermatitis herpetiformis must never be lost sight of and considered in arriving at a diagnosis. In my case the relapses were due, in part at least, to recurring attacks of urticaria. In differentiating, it must be remembered that dermatitis herpetiformis presents cutaneous manifestations that are more intense, persistent and chronic than erythema multiforme. Pemphigus is characterized by blebs, while in dermatitis herpetiformis the polymorphisms of lesions and irregular evolution of the lesions are sufficient to distinguish it.

To relieve the intense itching, burning, etc., will tax anyone to the utmost. I obtained great benefit during these paroxysms by the use of strychnia and atropia combined and given hypodermically. I also obtained relief from the topic application of antipruritic ointments and lotions. I will mention two especially as follows:

R. Chloral Hydt.
 Pulv. Camphor.
 Pulv. Gum Acacia.....aa 3i
 Ungt. Simplis.....3i

Mix. et Sig.—Apply as required.

Also—

R. Acid Carbol.....3ss
 Glycerite Cocain (5 per cent.).....3ii
 Glycerte Amyli.....5i

M. et Sig.—Apply as directed.

I also used to advantage a lotion composed of the following:

R. Acid Carbolic.....5ss--i
 Glycerite Cocain (5 per cent.).....3iv
 Acid Hydrocyanic dil.....3i
 Aq. Sambuci. add.....3iv

M. et Sig.—Bathe the parts freely as required.

For curative treatment I relied entirely on the internal use of arsenic and preferably in the form of the asiatic pill, the composition of which is as follows:

R Arsenici Alba.....gr. v
 Pulv. Piper Nigrìgr. viii

Gum Arab.....	gr. vi
Pulv. Althea Rad.....	gr. v
Aq. Font.....	2 s

M. et—Ft. Pill. No. 100—Sig.—One to four pills three times a day with care.

These pills should be gradually increased to tolerance. Too much care and attention can not be given to the diet and state of the entire gastro intestinal canal.

Saline diuretics and cathartics are to be used freely as indicated. Last, but not least, I should advise all the Turkish baths that can be borne. If compatible with the patient's purse I should advise a short stay at Hot Springs.

With these measures faithfully used I think a cure will result in most cases.

Malarial Hæmaturia.*

By L. A. MURDOCK, M. D., WOODVILLE, MISS.

In selecting a subject for a paper to present to you I have chosen a disease that is not only dreaded by everybody living in a malarial district, but by the physicians as well. I fully appreciate the fact that the subject I have selected is a very difficult one to deal with for several reasons, some of which are the very great differences of opinions in its pathology and treatment; and, too, I feel my inability to deal properly with a subject of such extreme gravity, but I consider it one of practical importance to a great many of us and of interest to all.

As I understand one of the main purposes of this Association is that we might meet and exchange views and experiences with each other upon subjects of interest and importance, I will, therefore, avoid any attempt at a scientific or carefully prepared article, but endeavor to give you malarial hæmaturia as I have seen it during a twelve years' practice in the low lands of Louisiana. As I was located more than three hundred miles from a medical center or medical association, with but a limited library, what ideas I have formed are from battles fought alone, many of which were at the bedside of some relative or dear friend, where the heart, as well as the head, was involved; therefore, I crave your indulgence if these ideas wander very far from the path of sound reasoning.

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Cause. The cause of this disease is, beyond a doubt, malaria, but is it not probable that all, or nearly all, of the cases except a few of the milder form, malaria has ceased to exist and therefore plays no part, or at most a minor part, in the condition present when hæmaturia makes its appearance; and, instead of having a malarial trouble to deal with, we have a condition of sepsis, due to the countless dead microbes and destroyed red blood corpuscles, which have undergone a metamorphosis, producing a morbid condition of the blood causing this sepsis, which is, in my opinion, malarial hæmaturia.

All the cases I have seen, presented, practically, the same symptoms. A history of intermittent fever extending over a period of from a few days to several weeks or even months, when they are taken with a sudden chill varying in intensity, accompanied by vomiting. Generally as soon as the chill passes off they pass a large quantity of urine the color of porter. The temperature rises; skin becomes deeply jaundiced, and, upon examination, you find pulse full and rapid, tongue heavily coated with a yellowish white fur, some enlargement of liver and spleen, both of which are generally tender upon pressure. The nausea and vomiting are very distressing. Kidneys act copiously every three or four hours, discharging the same kind of urine. This condition generally lasts from four to twelve days. In one case that I saw it lasted only about two hours, while in others I have seen it continue, almost unchanged, for two weeks. In my experience the temperature declines but never reaches near normal until convalescence has been established. I have seen rigors occur at intervals but the temperature was always above normal. These rigors I attributed to fright, shock, or some other disturbance of the nervous system. When improvement takes place the urine clears up from the dark to a bright red, then becoming clear. Nausea stops; temperature runs lower; skin assumes a more natural color; pulse is slower and perspiration makes its appearance. It is now that the temperature reaches normal for the first time.

Treatment. If I am correct in my opinion that this is a septic trouble, there are, in my mind, two particular points in the treatment: Get rid of the morbid or septic material and replace it with new blood. To do the former we must open up every available channel for its escape. I give a purgative dose

of calomel, (from 10 to 15 grains) while at the same time that it acts freely upon the bowels, emptying the intestinal tract, rouses the sluggish liver. To assist the kidneys to do the work they are so nobly trying to do I give turpentine, 10 drops every four hours. As soon as the calomel has acted freely I begin Tr. muriate of iron, and give from 10 to 20 drops every four hours, alternating with the turpentine. Of course there are some symptoms that require treatment, particularly the sick stomach, for which I have given iced champagne, iced beer or oxalate of cerium, with benefit. As soon as the urine loses its dark color and assumes a high red, I stop the turpentine and give Fld. Ext. ergot (or Fld. Ext. viburnum) to control hemorrhage, and give acetate of potash or Spts. nitre to produce a profuse flow of urine and flush out the kidneys, leaving them in a good sanitary condition. In some cases the hyposulphite of sodium has a good effect to keep up the action of the liver. When convalescence is established, I put my patients on iron, arsenic and strychnia.

There is one more remedy that I should mention, yet I hesitate to do so for it is truly the "bone of contention" in the treatment of this disease. With all possible respect for those who make it a rule to use quinine in the treatment of every case of this disease (and I must admit that there are many good men on that side), I am sure that I have rarely seen any good results follow its administration in malarial hæmaturia, and am equally sure that I have seen a great deal of harm produced by it.

Some of our most reliable writers tell us that the malarial parasite differs in form with the stage of the intoxication. That in acute stages we find the amœboid bodies, and in the chronic form we find the crescentic; that the amœboid bodies disappear shortly after the administration of quinine, while the crescentic persist for a considerable time. If we accept this as a fact, and as every case of malarial hæmaturia is preceded by an attack of intermittent fever for some length of time, if it retains its malarial character it is no longer an acute attack and the parasites that belong to acute malarial affections that quinine destroys, but has assumed a chronic condition with the germ of that stage upon which quinine has little or no effect, I cannot see how quinine can be indicated. Then, again, there is no malarial poison present, and how can it be indicated?

Yet, I have seen a very few cases in which I thought there still lurked a small element of malaria and thought quinine was indicated and gave it, but these cases are very few indeed.

In conclusion, let me say that with the treatment given above I have treated forty-two cases and have had forty-one recoveries and one death, the latter occurring eight days after the fever and hemorrhage had disappeared. Prior to that time, when I used the quinine treatment, out of fourteen cases treated eleven died.

Podalic Version—Report of Two Cases.*

By W. A. CARNES, M. D., KOSCIUSKO, MISS.

As this operation was done in both cases to substitute a footling for a shoulder presentation, I will limit my remarks to the subject as applied to correcting abnormal positions of the fœtus. It is unnecessary to emphasize at this day the importance of an early diagnosis of the position of the fœtus in all cases of labor. This should have been impressed upon our minds ere we began the practice of obstetrics. If the diagnosis is made before rupture of the membranes we may attempt by external manipulation, or by the bipolar method, to correct the position. If this can be successfully done the case may be allowed to terminate naturally; failing in this, it is necessary to quietly and patiently await dilatation of the os uteri.

We should carefully examine occasionally to see that the membranes are still intact and determine the size of the os. When this opening has attained the size of a dollar and is soft and dilatable we may proceed. With the membranes still intact the operation will be greatly facilitated by the presence of the liquor amnii. If the membranes from any cause have ruptured before dilatation of the os is sufficient, it will be necessary to anæsthetize the patient and with the fingers dilate the os, for pressure of the uterus upon the fœtus in the absence of the amniotic fluid places it in a very dangerous position. Hence delivery should be completed as soon as possible. The anæsthetic greatly facilitates the operation after the liquid has drained away by causing relaxation of the uterus. By the use of the anæsthetic and the practice of patience the extremely disagreeable opera-

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tion of decapitation and mutilation of the foetus can in nearly all instances be avoided.

Case I—M. R., colored, multipara. Labor began at 7 o'clock p. m., pains were regular and powerful, they continued throughout the night without result. At 3 a. m., a physician was called. He diagnosed the condition at once, and as this was his first case of labor he thought it advisable to send for assistance. The writer arrived at the patient's bedside at 8 o'clock a. m. Examination revealed the following condition of affairs: The child was in the left scapula-anterior position, the right arm and umbilical cord were protruding from the vulva. The uterus was firmly contracted upon the child, and this contraction was permanent, showing that uterine exhaustion was present. There was constant pain in the uterus. The pulse rate was about 90. We secured as good a condition of asepsis as was practical under the circumstances. The patient was thoroughly anaesthetized. After cleansing the hands and arms the writer introduced his right hand into the uterus, using the prolapsed arm as a lever to push the shoulder and head up and to the left. After a little search one and then both feet were found. Making gentle traction the feet were gradually pulled down to the vulva: with the left hand the head was pushed upward by external manipulation. As soon as the feet were out of the vulva we felt that we were masters of the situation. Further manipulation was such as would be done in an ordinary footling presentation. The uterus contracted well and the placenta was delivered without trouble. The attending physician afterward informed me that the patient had fever for about three weeks after delivery. This was not a surprise, for it was impossible to secure strict asepsis. The child was not large, and judging from its appearance had been dead about two weeks, as the epidermis was loose in places.

Case II—Colored, 10 para. Labor came on at 3 p. m., pains regular. At 11:30 p. m., the writer was called to assist the attending physician. Examination revealed right scapula-anterior position. The membranes ruptured and the left hand and arm and the umbilical cord were protruding; no pulsation could be felt in the funis at the time. The manipulations in this case were similar to those used in No. 1. Considerable difficulty was experienced in getting the head and shoulder out of the way so the hand could be introduced. Immediately after the delivery of

the child there was quite a profuse hemorrhage. The placenta was delivered as soon as possible.

While this was being done a hypodermic of F. E. ergot, drachm $\frac{1}{2}$, was given. As the hemorrhage continued after removal of the secundines, we resorted to hot intra-uterine douches. This soon controlled it. The child was dead. It was in good condition, and death was evidently produced by pressure on the funis after prolapse occurred. The woman made an uneventful recovery.

The Medical Officer in the Merchant Marine Service.*

By E. MICHEL HOLDER, Bs. C., M. D., MEMPHIS, TENN.,

Late Surgeon Merchant Marine Service.

If I succeed in making this subject interesting I am satisfied; if I fail I have only made a mistake to be avoided in the future.

Occupying for nearly one year the position of medical officer in the Merchant Marine service should peculiarly qualify the writer to submit a true picture of the life and doings of the conscientious ship's surgeon of to-day, and I take from this experience the material out of which I have fashioned this paper.

In order that a clearer understanding of the subject may be had it is necessary to devote some space here to a consideration of the duties of a ship's surgeon.

The doctor is under the immediate command of the captain or his substitute. He is equal in rank with the chief officer. When on duty he is required to wear the prescribed uniform of the company. He is required to be present when passengers are embarked, making a careful visual examination of each steerage passenger, in order to prevent any passenger from boarding the ship who is evidently ill, and in the case of passengers bound for the United States, any passenger who is infirm or over sixty years of age, all idiots and insane persons or persons suffering from a loathsome or contagious disease, or a pregnant woman, if not accompanied by her husband. He is required to give proper medical attendance to all passengers, officers and crew free of charge. He is required to visit regularly all the sick passengers on board, making daily rounds at 8 o'clock a. m.

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and at 4 p. m., and at any other time when his services may be required. In addition to these regular visits the doctor is required to visit the steerage passengers several times daily, and after every regular visit he is required to make a report to the captain. He is responsible for the sanitary condition of the ship, ordering the proper disinfectants used whenever necessary.

In case of accident to a passenger the doctor, together with the purser (as a protection to the company) must inquire into the cause, or causes, of the accident and sign a written statement of the nature of the accident. The signature of the injured passenger is obtained, if possible, and also that of as many of the passengers and crew as have been witnesses to the accident.

Upon a time to be fixed on consultation with the captain, usually within the first two days after leaving port, all steerage passengers on the voyage from Europe to the United States who have not recently been successfully vaccinated must be vaccinated. The writer made no exception, vaccinating "one and all."

If a case of contagious or infectious disease develop, or a suspicion of such disease arise, it is the doctor's duty to inform the captain at once and to see that the patient is immediately isolated in one of the ship's hospitals. He is also required to make it his special duty to see that neither the patient nor the nurse have intercourse with the passengers or crew. The hospital for the contagious sick is located on the upper deck aft, and is ventilated from the top. Patients suffering from contagious diseases are not allowed to leave the ship's hospital until removed by the American quarantine authorities.

It is the doctor's duty to report all cases of sickness occurring on board during the passage upon a blank prepared for that purpose, such report to be given to the American boarding officer, who superintends the transfer of immigrants from the steamer to the immigrant depot.

It is customary, on arrival of the steamer at the home port, for the doctor to hand a list of the medicines, disinfectants and instruments required for the next outgoing trip to the captain, who countersigns and forwards same to the directors.

When actually required for the sick, any extra nourishment or liquors will be supplied from the ship's stores without expense to the patient, on a written order from the doctor, countersigned by the captain. By way of parenthesis, the writer will suggest

that it is necessary to the interest of the company for the doctor to see personally to the proper application of what liquors are so prescribed and supplied.

It is the doctor's duty to be on deck when the health officer of the American port boards the steamer off quarantine, and he should personally receive the officer, answer all his questions and report to him the cases of sickness, deaths or births that occurred on board during the trip. On arrival at the pier, when the passengers are landed, the doctor is required to stay on the ship as long as there remains a passenger on board, and he is required to accompany the steerage passengers to the United States Landing Bureau for immigrants. In case there is amongst the passengers any one under medical treatment he should state to the medical officer of the United States Immigration Bureau the nature of the disease, its present stage and the treatment applied. After seeing the passengers safely landed and delivered to the United States officials the doctor is required to return to the steamer and report to the captain. While in port the doctor must be on board from 9 to 10 a. m., and must ascertain from the captain or chief officer whether his services are further required.

On leaving the ship he is required to inform the officer of the watch, leaving with him the key to the dispensary and also his address while absent.

Should any other medical attendance be necessary during his absence the cost of same will be deducted from the doctor's salary.

He must keep a record book or Doctor's Journal in which the name of the sick passengers, their diseases, the treatment and such further remarks as the case may call for, and on arrival at the home port this journal is countersigned by the captain and handed over to the directors of the company. In England it goes to the board of trade.

So much for the duties of the ship's surgeon, and as long as everything goes smoothly all is well. But one bright summer's day a ship sails from a yellow fever infected port in the West Indies, bound for the United States. During the voyage fever breaks out on board. The ship's surgeon goes to the captain and reports a case of yellow fever. The captain admonishes him above all things to keep quiet about the matter and report the illness to the American quarantine officer as a case of malarial fever. The doctor, no matter how he dislikes

being a party to such a crime, for fear of losing his position, is compelled to obey the captain's orders. The writer knows of just such a case which occurred at the port of New York, in 1896.

A ship was passed with a half dozen cases of yellow fever on board, by the State quarantine officials, and it was not detected until the immigrants were landed at Ellis Island. There the Marine Hospital Surgeon, in charge of the Immigrant Station, ordered the passengers back on board and the ship to be put in quarantine.

Then, again, the writer knows a surgeon, Dr. C. H. Leet, of Liverpool, England, who by a too zealous discharge of his duty, viz., by reporting, by official letter to the directors of the Atlantic Steam Ship Company, the insanitary condition of his ship, was discharged.

In the writer's personal experience, during his short term of office, he has known the captain, in his laudable anxiety to fill up the ship and make it pay, put passengers in the ship's hospitals without the knowledge or consent of the surgeon.

At present the surgeons are in great need of some form of protection to render them independent of the captain and owners.

Bearing on this subject, I will quote here the leading article in the *British Medical Journal*, dated July 14th, 1888:

"The President of the Board of Trade, to shift the blame (referring to mis-appropriation of hospitals) through Dr. Tanner's question in parliament, on to the ship's surgeon, stated that it was the surgeon's duty to see that the requirements of the law are not evaded, if they have been evaded, then the surgeons who have not reported the evasions have failed in their duty."

What has been the fate of surgeons who have found fault, for although the Board of Trade has not heard of it, fault has been found, as might be ascertained on application to the Local Government Board. Are any of these courageous surgeons afloat now? Is it not well known that much less than a formal complaint, even a protest, or a suspicion that the surgeon once, for an imprudent moment, thought of making a protest, is enough to lead to instant dismissal.

Are not the agreements between the steam boat companies and surgeons so drawn that these officers are at the mercy of

the companies, who may even refuse without reasonable cause given, to pay the salary fairly earned? When the public health service comes to be reformed on a sound basis, it will be necessary to make the health department responsible for the supervision of the health of passengers carried by emigrant and trans-oceanic passenger ships. Then the responsibility would be met, now it is shirked because it falls upon a board which has no sanitary adviser. The Board of Trade does not understand the gravity of the case, or the importance of its duties in this matter, and in consequence very serious inconvenience and expense are inflicted upon our colonies and upon the United States. ** Obviously the ship ought to carry some independent officer responsible, not to the ship owners whose interest it is to smother complaints, but to a department whose business it is to investigate them. Such an officer the ship's surgeon might be, and where the place has been tried, as in the emigration service of the Australian colonies, he has well discharged his duties. Sooner or later the United States and our colonies will grow tired of waiting and the board will have to take down the tape-bound parcel of papers from its shelf and find, under external compulsion, a solution to a difficulty which might now be made to cease to exist by the simple expedient of doing what is just and right because it is right and just.

Again, I will quote here the report of the *Lancet's* Special Commission on the British Emigration Service, made in 1888:

"If the surgeon on board were quite independent of the proprietors of the ship and owed his appointment to the sanitary authorities, all ship owners would have to observe the same rules and standard of excellence. At present the surgeons are in great need of some form of protection to render them independent of the captains and owners. Such a reform would have for its effect the introduction of a better class of surgeons into the service and this would be a great advantage to the ship owners. Also it is urgent that the surgeons on board ships should be instructed to make full reports."

In conclusion, the writer desires to suggest the following forms:

1st. The appointment at every American port of a Shore Surgeon or Medical Superintendent to supervise and instruct in person inexperienced Ship Surgeons in their duties.

2d. The Surgeon's log book, to contain daily entries of

every sick person on board, together with a record of the treatment.

3d. Ship's hospitals to be under the Surgeon's charge, whether occupied or not.

4th. Ships Surgeons to have authority to early admit sick members of the crew into one of the ship's hospitals, where diet and medical treatment can alone be satisfactorily carried out, giving the man a fair chance for his life.

5th. That the Surgeons be appointed by a National Bureau of Public Health, so they may be quite independent of the proprietors of the ship, thereby removing the power of dismissal from the officers of the company.

If these reforms could be brought about, then a class of thoughtful, experienced and contented medical officers, with robust self-respect would soon fill the places of the hen-pecked doctors of to-day.

All would then work harmoniously on board and human life would be effectually safe-guarded.

SANMETTO IN CYSTITIS, PROSTATITIS AND IRRITABLE BLADDER.—I have been using Sanmetto in my practice for two or three years. I have used it in a good many cases of cystitis, prostatitis and in all cases of irritable bladder, with the most gratifying results.—R. T. HOCKER, M. D., Ex-President South-western Kentucky Medical Association, Arlington, Ky.

A USEFUL CHART.—Write to the Imperial Granum Food Company, New Haven, Conn., for sample copies of their new "Nursing World Fever Chart" for recording the vital signs and other information relating to the baths given in the treatment of fever cases. It is very complete and will be found especially useful in typhoid fever.

It is the desire of G. W. Flavell & Bro., Philadelphia, Pa., to extend their appreciation to the medical profession for the continued favors for their line of goods, by stating that there will be no advance in prices for goods on account of any Stamp War Tax.

Editorial.

H. M. FOLKES, M. D., BILOXI, MISSISSIPPI,
Editor and Business Manager.

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Officers Mississippi State Medical Association, 1898-'99.

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First Vice-President—R. E. JONES, M. D.....Crystal Springs
Second Vice-President—W. L. SUTHERLAND, M. D.....Rosedale
Recording Secretary—J. R. TACKETT, M. D.....Biloxi
Assistant Secretary—C. H. TROTTER, M. D.....Bogue Chitto
Treasurer—J. F. HUNTER, M. D.....Jackson
Corresponding Secretary—D. S. HUMPHREYS, M. D.....Greenwood

SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

W. G. KIGER, M. D., President.....Brunswick
J. R. TACKETT, M. D., Secretary.....Biloxi
W. A. JOHNS, M. D.....Corluth
P. W. ROWLAND, M. D.....Flora
J. D. SMYTHE, M. D.....Greenville
H. A. MINOR, M. D.....Macon
H. CHRISTMAS, M. D.....Tchula
GEO. A. TEUNNISSON, M. D.....Monticello
E. A. ROWAN, M. D.....Wesson

THE North Carolina Board of Health and the Medical Society of the State have endorsed the Caffery bill and requested their representatives in Congress to support it.

WHENEVER yellow fever, cholera, plague or typhus fever has passed the quarantines of the United States, or in any manner any one of these diseases has gained entrance or has appeared within the limits of any State, Territory, or the District of

Columbia, the quarantine regulations of the United States, prepared under the direction of the Secretary of the Treasury, shall be supreme and have precedence of State or municipal quarantine laws, rules or regulations, and the President is authorized to enforce the same within the limits of any State, Territory, or the District of Columbia, and to control the movement of vessels, railway trains, vehicles, or persons within any State, Territory, or the District of Columbia to prevent these diseases from spreading from our State, Territory, or the District of Columbia to another State, Territory, or the District of Columbia, and to prevent unnecessary restrictions upon interstate commerce; and whenever, in accordance with the rules and regulations made as herein authorized to prohibit or permit the movement of vessels, railway trains and vehicles, or transportation of persons, prohibitions or permits have been made or granted, any person violating said prohibition or permit shall be deemed guilty of a misdemeanor, and shall be subject to a fine of not more than \$500 or imprisonment for not more than twelve months, or both, at the discretion of the court; and any violation of the said prohibition or permit shall be reported to the United States district attorney of the district in which the offense has been committed, who shall thereupon institute necessary proceedings for the recovery of the penalty herein imposed.

The above is an extract from a bill favorably reported by the Committee on Interstate and Foreign Commerce and entitled: A bill amending an act granting additional quarantine powers and imposing additional duties upon the Marine Hospital Service, approved February 15, 1893.

This is certainly a very remarkable bill. It is true that just preceding this paragraph is a section which says that the Secretary of the Treasury shall not interfere with State or municipal authorities in the regulation of local affairs so long as the introduction and spread of diseases are properly controlled and treated.

Positively no ground exists for objection to this measure on the score of a lack of authority and power. I wonder if this will really become law. Such a field of thought, as to the wonderful possibilities opened up to the head of such a bureau, actually takes one's breath away.

Should this measure become law the present head of the Marine Hospital Service will have ample opportunity for the ex-

ercise of that same marvelous executive ability which has enabled him to overcome so successfully his opponents in the past. This measure does for our State what we have done for the municipalities.

It looks as though the handwriting were on the wall.

WHEN writing the above, about June the 1st, I had no idea that the handwriting would so rapidly attain legible proportions, but the wonderful series of events in the past few days has made the sooner probable what was only supposed to be a remote possibility.

The Atlanta convention has indeed borne fruit. If Senator Caffery had been the controlling factor in shaping the policy of that meeting, he could not have done a thing to make it the more fit to serve as an object lesson. It is one thing to make agreements and others to keep them. So long as the commercial bodies of any city are permitted to control its health affairs, so long will we have quarantine used as a weapon. We have lately seen some innovations in sanitary work, for instance a whole territory quarantined because it had in it at a remote point seven cases of yellow fever, this in face of the fact that the Louisiana Board did not consider it at all necessary to quarantine a large town—New Orleans, for instance—because it happened to have within its confines a few cases of fever. Another feature in this modern sanitary work is the refusal of a health board to accept its own certificates of immunity.

Parties from Progresso with a ten day trip, including five days in Gulf Quarantine Station, have to pass through the detention camp for ten days or more.

The great State of Alabama has given us a lesson in sanitary science which should linger long in the mind of the student in the future. Parties from the coast can only ride through the confines of this aforesaid State in a closed coach with a guard at either end. Mind you the coast has been pronounced clean by the Marine Hospital Service, who declined to receive persons from any of the coast towns because the camp was only for parties from infected points.

Florida, through her health officer, put on a quarantine against the infected locality only. Unreasonable and oppressive quarantine will invariably be evaded when opportunity presents,

and with this in mind the sweet reasonableness of things should ever obtain in all such work.

The first thing in quarantine is to protect, but it should always be remembered that the people within the lines are human and have some rights. Fierce anger at the existing quarantines has almost completely overshadowed the great danger of a repetition of '78, a possibility, I regret to say, not so remote as many would like to believe.

From the cold standpoint of facts and reason the conclusion is inevitable that uniformity is absolutely essential in quarantine rules and regulations. Exactly how this is to be obtained and through what channel remains to be seen, but it looks as though the "*Mene, Mene, Tekel Upharsin*" were written in letters of fire.

* * *

It is to be hoped that the medical department of the army will not present the same state of unpreparedness as has been so much in evidence in other branches of the service. Every possible contingency should have been thought out, and no lack of quinine or other essential drugs cause one of our brave boys to suffer.

* * *

NOX use of a cerebral centre will have a tendency to dull its acuteness after awhile. With this fact before us we can the more readily understand why it required fourteen coaches to transport two regiments of the regular army and only seven for Roosevelt's 1200 each, men and horses: or again, three coaches were ample for one of those big Texas regiments. The truth is that our army has a severe case of dry rot and Lord Salisbury's remarks in regard to dying nations might, by a little turning and twisting, be applied to us. The republics of the past have nearly always fallen through by their armies. It is said that history repeats itself.

* * *

THIS immune regiment business has developed into a perfect farce, as fully one-half of the so-called immunes have never had yellow fever; in fact, it is said that many of them are from the North, and as such are more susceptible to tropical fevers. It is to be remembered that more of our men will die from malaria and dysentery than from yellow fever, and with this in view it is an outrage to take in men on false pretences. Attention is respectfully called to the fact that residence in the South does not confer immunity from yellow fever.

Public Health.

Cases to date in McHenry are twenty-three, of which are five now on hand. The foci are reduced to two. Great hopes are entertained that the fever will be stamped out, though grave danger still exists.

* * *

Cremation means purity; burial means pollution; therefore sanitary science bids us exchange the old custom for the new.—*Brown, State Medicine.*

* * *

Our laws concerning quacks and other irresponsible prescribers should be more strictly enforced and the mask should be removed from cure-all medicines.—*Ibid.*

* * *

Mr. George T. Angell in *Our Dumb Friends*, quotes Hon. Casey Young as saying that powdered sulphur worn in the soles of shoes will prevent one's acquiring yellow fever. This may be so, but in our experience all preventives have proven a failure, fully ninety-five of those exposed having the disease.

* * *

A certain daily paper has recently published a communication from its correspondent at Laurel anent the small-pox which has existed there for some time past. This learned citizen undertakes to show that the disease is not small-pox but chicken-pox, and by a variety of reasons—evidently supplied by one of the medical men who either was so ignorant or else so corrupt as not to announce the disease—endeavors to prove his town free from a malady which is traceable right on back to Shubuta, where a correct diagnosis had to be made by a State health officer also. His town also is responsible for the disease making its appearance in Hattiesburg, where it was correctly diagnosed by the county health officer, so if all these different men are mistaken this is a most remarkable town where chicken-pox and small-pox can do the Dr. Jekyll and Mr. Hyde act with all swiftness and despatch. The truth is that the two doctors should be

ashamed of themselves, and if they are ignorant of small-pox by all means let them learn something about the disease.

* * *

In response to a letter received on the 6th of June, Dr. Haralson went to the little town of McHenry, on the Gulf and Ship Island Railroad, twenty-eight miles from the coast, where yellow fever prevailed last year. He arrived on the morning of the 7th, and at once proceeded to make an examination of some seven cases then under treatment by Dr. McCarthy, the local physician. These cases were pronounced by him to be yellow fever, but to have other official statement to the same effect he wired Dr. Murray of the Marine Hospital Service, to come at once.

* * *

Dr. Folkes, on the morning of the 8th, passing through McHenry en route to the Laurel small-pox, was stopped by Dr. Haralson to see the cases, and confirmed the doctor's diagnosis. Dr. Murray arrived about 4 p. m. of the same day, coming through the country, as he had missed connection on the morning train. He confirmed the diagnosis. On the morning of the 11th came Dr. Carter, Marine Hospital Service, and Dr. Gill, Louisiana Board, who also confirmed the diagnosis. Four slides with specimens of blood from Jo. Leggett, Mrs. Smith, Mrs. Donald and young Switcher were sent to Dr. Archinard in New Orleans. His report was that all four contained bacilli icteroides, two giving typical reaction and two slow. This I suppose will settle the diagnosis for all time as far as the profession is concerned, though the curb-stone medical will be bound to have his say. The town was at once cordoned and a census taken. House quarantine was put on the next morning and has been since maintained. The census revealed 323 people, of whom seventy had had yellow fever. Little excitement prevailed in the town, as assurances were made that the mills would continue to run, thus enabling the people to make a living and keep them satisfied. In fact, only twenty-three availed themselves of the privilege of going to the detention camp at Fontainebleau.

The first case of fever occurred in the person of Mr. Leggett, a merchant, closely followed in a few hours by the second case in Prof. McNeill, both occurring on the morning of May 20, one about 3 o'clock, the other about 7 or 8. On the 17th both of

these men had gone into a little ice house which had been used during the fever last year, the owner of which had died of the fever. In this house were a number of sacks left over from ice shipments during the epidemics, and a mass of saw dust in which many are said to have evacuated their bowels during the course of the outbreak last season. From these two cases every case in town is directly traceable. At the present time eighteen cases have so far been reported. The foci are reduced to four, as fumigation under the Marine Hospital Service was commenced on the 12th and has followed up each house closely. Dr. Haralson was placed in charge and has bent every effort to stamping out the fever. So far as known not a single case has developed from any one who had been in town and had left. The Eucutta case was Prof. McNeill, who had a relapse, having been the second case at McHenry. The Louisiana board quarantined the whole coast. Mississippi followed suit, as also did Mobile. Alabama last, but not least, wrote herself down in a quarantine proclamation destined to stand as a model for all States not to do likewise. Florida, which has the best quarantine man in the South, as far as States are concerned, acted with sound judgment and quarantined the focus of infection, McHenry, alone.



CHAPTER 79.—AN ACT to amend Section 3246 of the Annotated Code of Mississippi, in reference to the time, place and manner of conducting examinations for license to practice medicine; and to amend Section 2279 of the Annotated Code of Mississippi, in reference to the system of reporting and investigating contagious and infectious diseases in the State, and to enlarge the general powers of the State Board of Health as to quarantine and the enforcement thereof.

SECTION 1. Be it enacted by the Legislature of the State of Mississippi, That Section 3246 of the Annotated Code of Mississippi be amended to read as follows: The State Board of Health shall meet at the capital twice in each year, at such time as may be designated by the board, for the purpose of examining applicants for license to practice medicine, and shall continue in session until all applicants are examined and the examinations are approved or disapproved. All examinations as to applicant's learning shall be upon written questions and answers, and distinction shall not be made between applicants because of the different systems of schools of practice that may be chosen.

SEC. 2. That Section 2279 of the Annotated Code of Mississippi be amended to read as follows: When yellow fever, cholera, dengue, small-pox or other virulent epidemic contagious diseases shall make its appearance in the State, the State Board of Health shall take charge of the infected district or locality, and enforce such rules and prescribe such measures as it may deem necessary to prevent the spread of disease or to suppress it. The presence of any two members of the executive committee of the State Board of Health shall constitute a quorum for the transaction of business, and all official meetings of the executive committee of the State Board of Health, as to time and place, shall be held pursuant to a call of the president of the State Board of Health.

SEC. 3. It shall be the duty of every practicing or licensed physician in the State of Mississippi to report immediately to the Secretary of the State Board of Health every case of yellow fever, cholera, dengue, small-pox or other virulent epidemic contagious diseases that occurs within his practice.

SEC. 4. Any practicing or licensed physician of the State of Mississippi, who shall wilfully fail to report immediately to the Secretary of the State Board of Health any case of yellow fever, cholera, dengue, small-pox or other virulent epidemic contagious diseases that occurs within his practice, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be punished as provided by law for misdemeanors.

SEC. 5. Any person or persons who shall falsely and maliciously disseminate or spread rumors or reports concerning the existence of yellow fever, cholera, dengue, small-pox or other virulent epidemic contagious diseases in any portion of this State, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be punished as now provided by law for misdemeanors.

SEC. 6. It shall be the duty of the Secretary of the State Board of Health, upon the receipt of information that there is any case of yellow fever, cholera, dengue, small-pox or other virulent epidemic contagious diseases in any portion of this State, to order the proper county health officer or other competent physician to proceed immediately to said place and to investigate the said reported case or cases of yellow fever, cholera, dengue, small-pox or other virulent epidemic contagious disease, and to report to the said Secretary of the State Board of Health the results of his said investigation, and said Secretary of the State

Board of Health shall at once declare any infected point to be in quarantine under a competent physician as State Health Officer, and shall notify the president of the State Board of Health, who shall, if practicable, call a meeting of the State Board of Health for the consideration of the same. Said State Health Officer shall have power, and it shall be his duty, in accordance with the quarantine regulations of the State Board of Health, to place any and all such restrictions upon ingress and egress at an infected point as may be necessary to prevent a spread of the disease from the infected locality, and to so control the population of said infected point, as to the disposition of the same, as shall best protect that population and at the same time prevent a spread of the infection among the same.

SEC. 7. The Governor of this State may, if he deem the same wise and proper, provide the said State Board of Health with all the requisite means to enforce whatever quarantine regulations may be deemed necessary by said State Board of Health, including such armed forces from the National Guard or militia of the State, as may in the judgment of the Governor be required by said State Board of Health. But the National Guard and militia shall at all times be under the direction and command of the Governor.

SEC. 8. The State Board of Health shall have the power, by and without the consent of the Governor of this State, when the occasion demands it, to call upon the general government for such financial and medical aid as the necessities arising out of any epidemic may require.

SEC. 9. That the State Board of Health shall formulate and enact all quarantine regulations that pertain to the passenger and freight traffic of all railroads and common carriers that enter into or operate within the limits of the State of Mississippi; and the jurisdiction of the State Board of Health in such matters shall be paramount and exclusive; provided, that this shall only confer authority upon the State Board of Health to permit travel and commerce, to allow necessary stops at grade crossings, turn tables, water tanks and coal chutes, and to pass persons or things through and beyond the lines of any quarantine maintained by any county or municipality in the State, and shall never confer authority upon said board to lodge or stop, within the lines of any municipal or county quarantine, any person or thing excluded by such quarantine, except as to the investiga-

tion of any reported case or cases of yellow fever or other contagious or infectious disease, the putting in quarantine of any infected point and the establishment of relay and detention camps.

SEC. 10. That all acts and parts of acts in conflict with this act be and they are hereby repealed, and that this act take effect and be in force from and after its passage.

Approved February 10, 1898.

Abstracts and Extracts.

Tobacco is a potent agent for harm. It should never be used by the young, growing boy, or the thin, nervous dyspeptic. The physician should always point out its dangers when he suspects it to be doing harm, and insist that it be given up at once. —Brownson, "Tobacco Habit as a Cause of Disease," from *Charlotte Medical Journal*.

* * *

SOME DON'T'S ABOUT HEART DISEASE.—Don't feel called upon to give digitalis as soon as you hear a murmur over the heart. Study and treat the patient and not the murmur.

Don't conclude that every murmur indicates disease of the heart.

Don't forget that the pulse and general appearance of the patient often tell more than auscultation.

Don't neglect to note the character of the pulse when you feel it. Possibly you may look at the tongue to satisfy the patient. Feel the pulse to instruct yourself.

Don't think every systolic murmur at the apex indicates mitral regurgitation; every systolic murmur at the aortic interspace, aortic stenosis. The former may be trivial, the latter may be due to atheroma of the arch of the aorta.

Don't say every sudden death is due to heart disease.

Don't forget that the most serious diseases of the heart may cause no murmur. A bad muscle is worse than a leaky valve.

Don't examine the heart through heavy clothing.

Don't give positive opinions after one examination.—*Philadelphia Medical Journal*.

To clean rusty instruments fill a suitable vessel with saturated solution stannous chloride (chloride of tin) in distilled water. Immerse the rusty instruments and let them remain over night. Rub dry with chamois after rinsing in running water, and they will be of a bright silvery whiteness.—Brodie, *Journal of the British Dental Association*.

My conclusions are then that we have in this method a rapid, cheap, easy and sure method of sterilizing instruments without in any way injuring them.—Dr. H. O. Reik, *Johns-Hopkins Reports*, "Sterilizing of Instruments by Formaldehyde."

Dr. Chas. Douglas (*Medical Review of Reviews*) says: Green stools are never healthy. They always show imperfect digestion. The damage to the child is in direct proportion to their presence. These stools render children more susceptible to acute gastro-enteritis in hot weather. The high infantile summer mortality follows children suffering from this colored stool. Through unhealthy nutrition the blood is poisoned and the various tissues are improperly nourished. The excreting organs, particularly the kidneys and liver, are frequently damaged by the extraordinary duties imposed on them in the elimination of these poisonous results from the blood. The continued irritation and innutrition favors the development of diathesis and acquired cachexias. No child is free from complications dangerous to life who suffers from frequently recurring green colored stools, particularly the liquid and foul smelling ones.—*Charlotte Medical Journal*.

HYPODERMIC PURGATIVE.—Fifteen minims of the following will produce purgative effect:

℞.—Caffeine.....	i.
Chloral.....	aa gr. 7½.
Aq.....	minims 75.

—*Tri.-State Medical Journal and Practitioner*.

Book Notices and Reviews.

It affords us pleasure to cordially endorse the recent work on Yellow Fever by Dr. Just Touatre, of New Orleans. It is full of the finer shades on the differentiation of Yellow Fever. As an epitome of years of experience it is surpassed by few books of a similar nature. A close study of cases 26, 27, 28, 31, 33, 35, will prove of especial interest. The doctor's experience with cases showing pus formation has not corresponded with ours.

Medical News and Miscellany.

FOR SALE IN MISSISSIPPI.—A two thousand dollar practice, seven room residence, all necessary outbuildings, a well of good water, 6 acres of land attached, in a growing railroad town with good church and school facilities. Address this office.

SYPHILIS.—When a patient presents himself for treatment, he should be placed upon the following recipe (which fully meets all indications) until the symptoms disappear, his appetite is improved, and a general feeling of vigor and activity exists.

R.—Hydrag. Bi-chlor.....2 grains.
 Iodia6 ounces.
 M.—Sig.—One teaspoonful after each meal.

Iodia is prepared by Battle & Co., St. Louis, and contains extracts from the green roots of stillingia, helonia, saxifraga and menispermum. Each fluid drachm also contains five grains iod. potass. and three grains phosphate of iron. The tendency of the profession is too much toward discarding everything but mercury. I have often seen mercury alone, or combined with iod. potass. fail to heal secondary ulcerations, which speedily disappear when combined with vegetable alteratives. It is, therefore, best to have the good effects of the only three reliable remedies at once, viz., mercury, iodide and vegetable alteratives (which is obtained in the above prescription.) Lectures on Venereal Diseases, by W. F. Glenn, M. D.

Clinical Professor Genito-Urinary and Venereal Diseases, Medical Department Vanderbilt University.—*Southern Practitioner*.

SANMETTO IN GENITO-URINARY DISEASES.—I have used Sanmetto in my practice for the last five years, and find it has no equal in diseases of the prostatic portion of the urethra, in pre-senility, in that peculiar condition existing in anæmic and chlorotic girls just entering womanhood, and all abnormal conditions of the reproductive organs, in either sex, depending on a debilitated condition of the general system. Sanmetto has never failed me in senile prostatitis, or enlargement of the prostate gland in aged men.—*J. L. Smith, M. D., Durand, Mich.*

Eighty-six graduates in medicine and ten in pharmacy is the record of Tulane University for eighteen hundred and nine-eight. The standard of this school is being raised higher each year.

Assistant Surgeon Gibbs, U. S. N., was the first medical man to lose his life in the present war. He was killed in an attack by Spanish guerrillas on the marines at Crest Heights.

A hospital train recently left Washington for Tampa. It consisted of ten Pullman sleepers, one dining-car, one cooking car and a combination coach. It is fully equipped for hospital service, with medicines, surgical instruments and appliances. The train is under command of Major Richards and as it becomes necessary one or more coaches will be sent North with the sick or wounded, who will be taken to Fort Meyer, Va., Fort McPherson, Ga., or to other points as occasion may demand, those whose condition requires being sent to Ashville, N. C. The coaches remaining at Tampa will be used as a receiving hospital.

After three months absence our old friend, Dr. Daniel, has resumed his chair at the editorial desk of the famous *Texas Red Back* and announces his readiness to pour hot shot into quacks as of yore from the conning tower of that safe old ship of state. Long may he flourish.

Dr. R. W. Mitchell and a party of friends were down on a fishing expedition in the latter part of May and enjoyed them-

selves very much. This was the doctor's eighteenth trip down here and the JOURNAL sincerely hopes that he will double the number, even though it is a hardship to leave Memphis for two weeks once a year.

Mrs. Dr. Crofford and family after quite a lengthy stay, being caught here by the fever last year, have returned to the beautiful new home which the doctor has erected in the suburbs of Memphis. We trust that her unpleasant experiences of last fall will not deter her from making another visit to the coast.

Drs. Kent and Acker are the assistant surgeons of the Second Regiment.

The limit of toleration is so quickly reached in a majority of cases where the salicylates are given that physicians are often puzzled to find means to continue their exhibition—especially in rheumatic conditions requiring prolonged employment. A vehicle, therefore, minimizing these adverse effects, and at the same time of particular indication in such conditions, must obviously make an ideal treatment. Such a vehicle the practitioner has in the Phillips' Milk of Magnesia—one of the most advantageous menstrooms yet employed for this purpose, completely embodying the desirable features noted. Mention of this would seem superfluous, to the profession, so generally has the preparation been used with marked success for many years in this connection; but a good thing will bear repetition of its virtues. In conjunction with the iodides and bromides, Milk of Magnesia forms an equally useful association; and as the summer season is at hand it will be well to recall that in the gastro-intestinal disturbances of children this preparation ranks high as a remedial agent. It is a superior neutralizer in systemic or local hyper-acid conditions.

The Journal

.....of the.....

Mississippi State Medical Association.

VOL. II.

AUGUST, 1898.

No. 5.

Original Articles.

Oxaluria.*

By G. A. HENDON, M. D., LOUISVILLE, KY.

This is a disease not accorded sufficient prominence in our modern text-books. I have met with several cases in the past twelve months in my own practice and have deplored the lack of literature on the subject. The text-books to which I have had access dismiss the subject with but passing mention. It is not my purpose to discuss the etiology and pathology of the disease but simply to report a few cases that have come under my observation.

The first case was in a woman about 40 years of age, well nourished and rather stout; had never been seriously ill except a sharp attack of typhoid fever several years previous. Occasionally she had attacks of acute indigestion, one of which confined her to bed for fourteen days. She consulted me for a severe burning at the opening of the urethra and nymphae following micturition, with frequent desire to micturate. I made an examination of her urine and found the sp. gr. 1030, acid in reaction and loaded with crystals of uric acid and urates and calcium oxalate which presented the characteristic dumb-bell and envelope shape crystals. The patient had been in the habit of drink-

*Read by title before the Mississippi State Medical Association, April, 1898.

ing Waukesha water, which she said was the only remedy that gave her relief. I restricted her diet, forbidding sweets and such vegetables as rhubarb, cabbage, tomatoes, asparagus, etc. I ordered for her five drops of freshly prepared nitro-hydrochloric acid in a tumbler full of water, to be taken after meals. This plan was persevered in for a period of two or three weeks with a gradual disappearance of annoying symptoms and absence of the crystalline formations in the urine. About this time the patient passed out of my hands and I am not able to say whether a perfect cure was effected. In this case there was a notable absence of the nervous depression and hypochondria spoken of by the authorities in connection with this disease.

The next case I saw was in a young man who had passed through a protracted case of typhoid fever about two months previous; convalescence had been very slow. When I saw him he appeared to be well nourished and was attending to business. He suffered from a constant headache, vague pains in the back and region of the kidneys and various other parts of the body. He was mentally depressed and hypochondriacal and extremely nervous; at his first visit to my office he could scarcely sit still a minute or remain in one position long enough to give me a history of his case. I obtained a sample of his urine, found sp. gr. 1030, very acid in reaction; under the microscope the calcium oxalate crystals were even more clearly defined than in the first case. I pursued the same course as to medicine and diet in this case as in the previous instance, with a result of a positive disappearance of the lime salt deposit in the urine. I verified their absence by repeated examinations, both chemically and microscopically. There was, besides, a complete amelioration of symptoms and cessation of the headache and vague pains in the renal regions.

Following closely upon the heels of the cases just reported I had two or three patients consult me on account of becoming alarmed at the appearance of a thick, heavy, brick dust precipitate in the urine after standing in the vessel long enough to become cold. This deposit I found to consist of uric acid crystals and amorphous urates with a few crystals of calcium oxalate. These cases all belonged to a neurasthenic type; they suffered with headache, backache, loss of appetite, mental depression and constipation, with progressive loss of flesh. One patient in particular was a young married woman who had, for some time pre-

vious to coming under my care, suffered with nervous manifestations such as hysteria and cataleptic convulsions, all of which were thought to have been traced to ovarian irritation. These cases were placed upon appropriate tonic treatment and the regimen of diet described above strictly adhered to, and in addition were given fifteen grains of urotropin a day. In each instance the most gratifying results were obtained; the deposit in the urine disappeared with the headache, backache and other symptoms. The most marked benefit accrued in the case pointed out as presenting the pronounced nervous phenomena. These cases have all been under observation for a period of over six months and are allowed perfect freedom in diet, but none of the distressing symptoms described above have returned.

I made an experiment with the urotropin which I regard as of some value. Taking some of the brick dust deposit in a test tube, I added some urotropin powder, about three grains of the powder to three drams of the deposit; I warmed the mixture to about the temperature of the body and the precipitate was at once cleared up and did not re-appear after the mixture was allowed to cool for twenty-four hours, showing the solvent action of the urotropin upon uric acid, oxalic acid and other salts. In the light of my experience I regard urotropin as of more value than the nitro-hydrochloric acid.

Imperative Ideas.*

By HENRY PASERT, M. D., MEMPHIS, TENN.

In 1894, Haack Tuke, in a paper read before the Neurological Society, discussed a class of cases that have loosely figured in medical literature under different names, but, recognizing in them all one essential, characteristic feature that is common to all, he put them under the head of "Imperative Ideas."

He refers to those cases in which a person is tormented by a certain idea or words which arise with painful frequency and vividness. They dominate the mind with morbid persistency, although they are of an unusual and unwelcome character. The idea is complied with and the word uttered by the individual, contrary as they are to his habit or wish, and in spite of his will.

*Read by title before the Mississippi State Medical Association, April, 1898.

He is convinced of their absurdity and uselessness, but he dwells upon them and suffers mental distress in spite of his better judgment.

In speaking of imperative ideas, some cases would be more aptly styled "Imperative Emotions" and others "Imperative Impulses;" inasmuch as they practically mean the same there is no necessity to multiply terms. I shall not enumerate all the different shades and forms of imperative ideas. It has taxed the ingenuity of German and French writers to the utmost to coin names for them. I shall confine myself to a few representative examples and especially to those that have come under my personal observation. Thus I shall only mention arithmomania or the morbid habit of counting before a certain act is performed by the individual. Then we have what the French call *de'lire du toucher*, or the mania to touch objects and the antithesis—the dread to touch them. Other persons again suffer from the mania of washing, being in constant fear of dirt or contagion, and tire themselves out by continual ablutions. A large number of these cases have the malady of doubt, or, as the Germans call it, *grubelsucht*, or *zweifelsucht*.

Let me cite to you a few cases in illustration:

No. 1—A lady, single, public school teacher, occupies a room in a house with friends and relatives. She is in the habit of locking it immediately on entering and leaving. She has to get up several times in the evening to try the door. She is not afraid either of her person or her belongings. Often when going to school she has to return to see that the door is locked, though she has the key with her and knows it is useless. She can only find peace of mind by having her doubt removed.

No. 2—Another lady came to me with a pitiful story of life being a burden to her by constant counting before performing any trivial act. She often can not sit down until she has counted up to one hundred. If she once tries to break from the habit she is perfectly miserable, and can only find relief by getting up and counting to that number. The raising of a fork, the opening of a door, the ringing of a bell, is a laborious event with her. She can not do it without counting mentally one to a hundred. She sees the childishness of it but can not help it, and the non-compliance with it makes her more wretched than the doing of it. Sitting in church and the minister gives out a certain psalm to be read or a hymn to be sung, she has to count before open-

ing the prayer book. To dress and undress is a wearisome, tedious act for the same reason.

No. 3—A gentleman, teacher of music, sought relief from an impulse which interfered materially with his gaining a livelihood. When on his way to give a lesson or bent upon any other errand, if he heard a few bars of a tune or a piece of music, he was forced to return either to his own home or to the home of any one of his friends living near to finish the tune. He often came too late for his pupil. He was taxed with negligence and lost many lessons. When he tried to resist the habit he became so upset and nervous that he never again evaded it. Frequently at night, when already lying in bed, a person passing would hum a familiar tune. He could only find peace of mind in going down to his piano, very often when the parlor was cold, and finishing the snatch of music that his ear had unluckily caught. On such occasions he exposed himself to colds which confined him to his bed.

No. 4—This case is illustrative both of the mania of washing and fear of contagion. A lady had a constant dread of soiling her clothes or bedding with her dirty hands. Every time she dressed she had to wash. Every time she touched an object she hastened to the wash bowl. Though she did it innumerable times daily, from twenty to forty, she still had an idea that it was not properly done, and she was satisfied only after using the scrubbing brush repeatedly. She had a delicate, well-shaped hand and the scrubbing and scraping wrought havoc with her fine, transparent skin and rendered her unhappy. Bad as the consequence of the washing mania was, she preferred it to that nervous, excited state when she tried to keep from it. Then the dread of catching some contagious disease by means of her dirty hands overcame her. She then pictured all the dire consequences of blood poisoning, cancer, consumption, etc. The explanation that she was mistaken about it and need not fear such awful results was perfectly plain to her. She was free from any delusion that she suffered or would suffer from it, still in spite of her better judgment and will, she could not resist this imperative idea. While shopping and examining goods the thought occurred to her that it might have been handled by some person with a contagious malady. She would abruptly leave the counter, hasten home and give her face and hands a thorough rubbing. Her wash bill was simply enormous, for she changed her

underwear every time she was out on the street, fearing that they had picked up some poison with the dust as they came in contact with the pavement. The most harmless pimple on the face of a friend with whom she might be conversing threw her into a nervous state from which she could only find relief by resorting to soap and water. I could go on citing cases of different varieties of imperative ideas.

Thus, one patient never came to my office any more after I had removed to Court Square. He suffered from agoraphobia, or the dread to pass an open place. His feet trembled and beads of perspiration stood out on his forehead when he had to do it. He was utterly miserable when thinking of this absurd notion. He was powerless to overcome it. He would take the most circuitous route to avoid it. Another patient would pester me at all hours with questions of the most absurd nature. Is there really Heavenly bliss or not? Are there angels in Heaven or not? Is there room enough in Heaven for all new comers? What language is he most likely to use when confronting St. Peter? He often laughed to waste his time on such useless speculations, but they occurred to him again and again, though he was not what we would call a religious man. He suffered from what the Germans call *grubelsucht*.

All these cases which I have just cited are undoubtedly departures from the normal mental state, and it remains to be determined whether the boundary line separating sanity from insanity has been passed. Is it an insanity or a disorder of the mind? I bring this up in order to study the earliest departure from the normal. You will agree with me that they are not cases of insanity, for the patient suffering from the disorder perceives the folly of his acts, but does it in spite of his will and never labors under an illusion or a delusion. Nor are they absolutely pathological entities for there are imperative ideas of all grades and degrees from those of the most trivial nature to those that already shade off into the field of delusion. Take for example dominant ideas that all of us have experienced. How often have we shuddered when looking down from a high tower or standing on the brink of a precipice and felt the impulse, though only for a second, to precipitate ourselves forward. Many of us have been annoyed by the doubt whether the front door was locked or the gas jet put out, and we could only find peace and sleep by getting out of a warm bed to ascertain the fact. We

all know persons, even among the profession, who, at the sight of a sharp, long, glistening knife or keen razor, associate with it a long, deep cut, or slashing of the throat. All these mental states are perfectly compatible with sound health, and here we might probably find the clue to the psychical process of imperative ideas. An act or word of little significance in our daily life has presented itself to our minds and left an impress there. It lies dormant in the sub-strata of consciousness under ordinary circumstances, without obtruding the higher centers or the organ of mind. Let this trifling act or word become associated with an important or disagreeable event with some injurious incident or severe calamity and the word or act forces itself upon consciousness or the higher centers with morbid persistency. It dominates the organ of mind so that its highest functions, will, attention and association, are in abeyance. It lowers the will so that in spite of it the individual carries out its behest. It relaxes the attention so that the morbid idea arises with painful frequency. It weakens the power of association so that instead of separating the act from its supposed dire consequences, the enfeeblement of the faculty of psychic combination is such that it is no more possible. The physiological process is ultimately in the cortico-cerebral region. The inhibitory function of the cerebral cortex over the sub-cortical strata is impaired just as the heart runs riot when the vagus is cut. There is a dissociation of the sub-conscious from the conscious, and the organ of the mind does not control any more the act, word or thought. There is ultimately a restriction of the field of consciousness. Of course I do not think that an unimportant act or word which was relegated to the domain of sub-consciousness could, in the normal subject, dominate to such a degree that its power of dismissing what is frivolous or irrelevant could be lessened. I believe it is only possible to occur in the neurotic subject. This accounts probably for the fact that some authorities have classed the subjects of imperative ideas under neurasthenia or hysteria, and others, going to the other extreme, treat them as cases of insanity. Though it is true that many suffer from neurasthenia or hysteria and others finally become insane, they strictly belong to neither class. They have only this in common—that they belong to the group of degeneration. They generally spring from a highly neurotic family and themselves possess stigmata of degeneration.

Take for example my first case, the one who suffered from the mania of doubt. Her mother was very nervous and "queer," her cousin had St. Vitus dance. She herself is nervous and suffers from migraine.

My type of arithmomania that I have cited has a still more significant history. She is hysterical. Her father was at one time confined to an asylum and her sister is as nervous as she is.

The third case which I have read to you, viz., the gentleman who had to hasten to a piano in order to finish a melody, part of which he had heard, was treated by me for an obstinate case of facial paralysis. His nerves are always in a tension. His brother is hysterical.

My illustrative case for the mania of washing and dread of touch was a highly hysterical woman. She had had many physical and mental shocks. I have stated above that the clue to imperative ideas might possibly be found in the trifling occurrences which are dismissed from our mind and merged into sub-consciousness, but which gain mastery over us under a powerful provocation in persons of a nervous taint.

In some of my patients I was able to trace it to a cause. The school teacher was a spinster. Several years before she consulted me a friend of hers on coming home found a man in her room, evidently bent on plunder. Shortly before she became afflicted with her doubting mania she read a similar story in the papers. She suddenly remembered her friend's experience and it flashed upon her mind that, living alone in a room, she was exposed to the same danger. From that moment on she became very anxious of locking her door.

From the lady who suffered from the mania of washing, I was also able to elicit the cause of her trouble. She had undergone in an infirmary an operation for rectal ulcers. During convalescence her nurse told her that cancer is contagious. This made a powerful impression upon her in her enfeebled mind, and, coming home after complete recovery, the first person that met her sight was a faithful old colored servant with some skin eruption on her face. Thenceforward the idea that what she had was probably cancer, and that she might contract it obstinately haunted her.

The prognosis is not always bad or good. The older the patient and the longer it has lasted, the more doubtful is the outcome, but seldom need we warn the family that it may actu-

ally assume a form of insanity, *i. e.*, become actual delusions. In the young and robust and when it is of a year's or two year's standing, it generally passes away or abates to a certain degree.

The treatment best adapted to these cases is the raising of the general tone by massage, electricity, tonics, change of climate and above all, suggestion.

Let me sum up the contents of this paper. Under imperative ideas we understand such cases where certain words or acts arise with painful frequency and morbid persistency in the mind. The idea is complied with in spite of the will and the knowledge of its uselessness. It is to be traced back to a slight occurrence which, under a mental or physical shock in the neurotically feeble, emerges from the field of sub-consciousness to the realm of consciousness. It is a disorder of cortico-cerebral origin and belongs to the great group of degeneration. The prognosis is very seldom bad and the most useful agents in combating it are tonics and suggestion.

This is not an exhaustive study. Such was not intended. It is suggestive simply as a psycho-physiological research.

Some Scrotal Surgery.*

BY L. SEXTON, M. D., NEW ORLEANS.

In April, 1896, a patient called for consultation concerning an enlarged and painful testicle, which had been increasing in size and pain for two years. Upon inquiring if he had ever suffered from injury to the organ I learned that five years previously he had been thrown by a horse upon the pommel of a saddle, producing some tenderness of the testicle but no perceptible enlargement at the time. About three years after this, however, the organ commenced enlarging, becoming more painful and irritated until at the time of consultation he was incapacitated for work. He had tried without any marked relief strapping, suspensory bandages, painting with tincture of iodine, lead and opium lotions, and at the time of consultation had a belladonna plaster covering the left inguinal region. I made a diagnosis of sarcoma from the following points:

A tumor of the testicle following a blow, a solid opaque

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progressing enlargement of the organ, constant pain in testicle and the extending up an enlarged cord into the abdominal region, dilatation and enlargement of the cord, unequal resistance of the swelling at different points.

There had been no recent blow or cause for hematocele, so I excluded that trouble from any consideration and advised castration at once. The pain had been so persistent that he readily consented to this, so he was sent to the Sanitarium and antiseptically prepared for operation by thorough washing with soap, ether and bi-chloride of mercury, and shaving the scrotum and pubis. He was an excitable patient, so chloroform was the anæsthetic used. The castration having been performed by making an incision from external abdominal ring, about three inches long down over the scrotum, the testicle was soon exposed by a few strokes with the knife, separating the layers with the fingers. The testicle and tunica were teased out in mass, with very few touches of the knife. Traction was then made upon the enlarged cord and a strong catgut ligature thrown around it, including the cord and all its vessels; the ends were cut short and the cord divided and allowed to retract into the canal. Teasing the tissue apart more with the fingers than with the knife produced no hemorrhage; a few vessels were twisted or clamped with artery forceps but none required a ligature, the incision was then closed with continuous silk suture, dusted with iodoform and dry dressing with T bandage (no drainage being deemed necessary) completed the operation. The glands in the groin were not enlarged or they would have been dissected out.

No water was used to wash the empty scrotum, the wound practically being sewed up in its own blood. Union by first retention resulted, the patient being discharged on the sixth day from the hospital. The dry dressing was covered with oiled silk in order to prevent infection from the urine; these dressings were only changed three times during the week; the wound was never washed, or parts disturbed, until the stitches were removed on the fifth day. All pain ceased immediately after the removal of the testicle. The patient was attending to his duties within ten days after entering the Sanitarium.

Varicocele is a more common complaint than many surgeons suppose. Ten per cent of young, unmarried adult males are thus afflicted, showing that it has some relation to the sexual function when not properly gratified. Or unusual excesses

might produce the same effect. Predisposing causes are the great length of the veins, absence of surrounding muscle tissue, and the tortuous course of the veins. The reasons given for its more frequent occurrence on the left than on the right side, is that the left vein is longer, it passes under the extended sigmoid flexure; its entrance into the renal vein at right angles, causing the blood to be dammed back into the scrotum.

Heavy lifting, jumping or straining, and excessive sexual indulgence, constipation or rectal diseases are the most frequent exciting causes. The constant anxiety about the effect upon virility and integrity of the sexual organ renders many subjects despondent, and a fertile prey for quacks and charlatans. The non-operative treatment consists in keeping the bowels well open, general tonics, cold bathing of the parts, the reclining position, when it is practicable; a comfortable silk elastic suspensory bandage worn constantly, are the usual remedies resorted to, but the operative treatment is radical and far preferable in most cases.

ILLUSTRATIVE CASE.

One of our medical students had suffered for many years with an aggravated varicocele. The pampiniform plexus felt like a bag of worms, the testicle was also soft and smaller than the one on the right side. The scrotum hung half way to the knees; he complained of being melancholy and having an almost constant dull pain, extending from the scrotum up the cord into the back. There was a constant sense of weight unless he wore a suspensory bandage. Having seen several cases relieved in the hospital by ligation and removal of a section of the vein he requested the removal of the varicocele in his own case.

The bowels were well opened and the adjacent parts thoroughly washed and shaved; he was anæsthetized with Schleich's No. 2 mixture of chloroform, 42 parts; sulphuric ether, 150 parts; petroleum ether, 15 parts. An incision was made three inches long extending from just above the testicle to within an inch of the opening of the external abdominal ring; the veins were laid bare and teased out from their bed with the finger and a few touches of the knife; the vas deferens, artery and two veins were separated from the others with as little manipulation as possible, held to one side by an assistant, when a catgut ligature was thrown around the other mass of veins below the external ring, another being tied near the testicle or globus minor of the epidid-

dymis, the section of veins between these ligatures were then removed and the two stumps of the cord were brought together by tying the long end of the ligature, thus helping to support the testicle in its new position. The longitudinal incision was then converted into a transverse wound by pulling the edges of the cut and closing it with continuous silk suture, practically taking all of the slack out of the scrotum. If the scrotum is too redundant it may be trimmed to fit, but usually sewing it up transversely has the desired effect. A dry bismuth dressing with iodoform gauze over it and a T bandage completed the dressing. The student left for his home, cured, within five days.

The third case was one of hydrocele which had been tapped and refilled twenty times. The tunica vaginalis testis had become thickened and the scrotum greatly enlarged. The parts were thoroughly washed and twenty minims of four per cent solution of cocaine injected into the anterior portion of the scrotum, covering a space of about two inches; through this a free incision was made, after the testicle had been grasped in the hand, so as to protect it from injury; the edges of the tunic held open, serum squeezed out and a small strip of iodoform gauze packed into the sac, being careful not to press it upon the testicle; this was left in for three days, by which time enough inflammation had set up to completely close the sac.

We have done this often in private practice and in the hospital without going to the trouble of dissecting out the sac, and up to the present time we have had no return of the hydrocele. This simple operation can be done with cocaine, with much less damage to the parts than the dissecting out of the sac which would require general anæsthesia. It should at least first be tried before subjecting the patient to the other operation.

Chronic hydrocele is accumulation of a serous fluid into the tunica vaginalis testis, and is so called in contradistinction to acute hydrocele, which is usually the result of some traumatism, orchitis or epididymitis.

Hydrocele is more common in warm climates presumably on account of the relaxing conditions resultant therefrom. Congenital hydrocele results from the failure of the cavity to close between the peritoneum and tunica vaginalis testis. A prominent diagnostic point between hydrocele and hernia is that the hydrocele transmit light, but it should be remembered that in cases where the tunic is very much thickened, or where the fluid

is dark from blood pigment, the hydrocele also may appear opaque, requiring the aspirating needle to clear up the diagnosis.

Hydrocele also develops from the bottom of the scrotum; is pear-shaped and stands out from the body. It is not hard like a tumor but fluctuates upon percussion.

We prefer the open method of treating hydrocele as being radical and less painful, but quite a number of surgeons claim splendid results from injection from one to four drachms of tincture of iodine into the tunica vaginalis testis after having withdrawn the serum, or injecting ten drops of pure carbolic acid, or a drachm of a five per cent solution of carbolic acid and glycerine.

Two Gynecological Cases.*

By H. A. MINOR, M. D., MACON, MISS.

In the bounds of the practice of every physician are women who have chronic disorders, some of which are directly and some indirectly sexual, some the result of reflex action, from some known or unknown diseased center, many of which we can safely eliminate from any connection with the womb and its appendages. In the management and treatment of some of these cases the doctor racks his brain and tries again and again to effect cure, but finds his efforts are in vain. Perhaps at last he thinks his patient cured; alas, sooner or later, she returns and pours into his unwilling ears the Illiad of her woes, or he finds her landing some patent nostrum or seeking help from his competitor. In common with my brethren, I have had many such cases. I will give you a brief account of two, wherein I effected cures, after repeated failures on the part of myself or brother physicians. I hope by reporting these to help others to secure success under like trying circumstances.

The dictum has been pronounced that a woman's ovaries must not be removed for any cause unless they—the ovaries—are diseased. I hold it to be true as a rule, but that cases do occur in which it is proper to remove them when healthy.

LAPAROTOMY FOR HYSTERIA-EPILEPSIA.

In 1892, Miss A. B., white, 25 or 26 years old, came to me for treatment of sundry ailments, having been treated by other

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physicians for several years. She gave me the following history: Was healthy and strong until three or four years before. To exhibit her strength to some other girls she lifted a heavy weight and then threw it backward over her head. She then, in that instant, felt something give way within. Had never been well since; suffered greatly at each period; had leucorrhœa, and was always constipated. During almost every period she had bad spells requiring a doctor's attention; suffered greatly from bearing down pains.

On examination I found her uterus retroverted, leucorrhœa, the cervix eroded, endo-metritis and endo-cervicitis. Ovaries normal as far as could be learned. The bad spells she complained of I found to be hystero-epilepsia. I will not detail the treatment of the mental organs. Suffice it to say in two or three months her womb occupied its normal position, all inflammation had been subdued and the leucorrhœa had disappeared. But the hystero-epilepsia was none the less severe. I treated her for this several months, but without benefit. I explained to her the cause of the hystero-epilepsia, and that the removal of the one disposing cause—retroversion and its consequence—had not removed the effect on the ovaries, the exciting cause, hence the continuance of the epilepsy. She begged for the removal of the ovaries, and her mother seconded the petition. She plead that she was a useful woman when well, but was now a burden to a poor and aged mother. After several more months, during which I treated her to the best of my ability, and after many solicitations, I removed her ovaries by laparotomy. My partner, Dr. J. S. Featherston, assisted me. Her recovery was prompt, nothing of special interest occurring during convalescence. The ovaries were normal, so far as I could tell by visual inspection. For several months afterward her menses appeared normally as to time and quantity and without pain. They then ceased for all time. From the day of the operation until now she has never had a symptom of hystero-epilepsia; she is sound and well, mentally and physically; has no neurosis, works hard and is a good and useful woman.

PYO-SALPINX.

Case II.—A married white woman, 27 or 28 years old, had one child: she is tall, well formed, and weighed in health about 135 pounds; this was one of the most trying cases that ever fell

to the lot of a doctor. Her reflex pains were without number; the most troublesome symptoms were nausea and anorexia; sometimes had amenorrhœa, leucorrhœa, constant but not abundant; had been going from one physician to another, myself among the number, for several years, seeking a cure but finding it not. About six months ago she came under the care of Dr. E. M. Murphy of my town. I and my partner, Dr. J. S. Featherston, were requested by the doctor to assist him in arriving at a diagnosis, and in devising a plan of treatment. We found she was very much emaciated, weighing only eighty-five pounds. She was gloomy and despondent in the extreme, almost hopeless. The history of her case in brief was that during these two or three years, she had, in addition to numberless pains and aches, suffered from nausea and vomiting, being able to retain very little food. She had been treated for sundry diseases, as endometritis, cervicitis, dyspepsia, gastritis, gastric ulcer, gastro-enteritis, etc. Had had abundance of treatment, appropriate and inappropriate. At this time she had had amenorrhœa for many months. Her feet and hands burned terribly. When examined by Drs. M., F. and myself, we found slight endometritis and cervicitis. The right ovary was prolapsed, but normal in feel. We detected no abnormality as to its tube. The left ovary was normal. We curetted the uterus, applied iodinized phenol to the endometrium and to the cervix several times, and gave the usual treatment, local and constitutional. We were still at sea as to the fons et origo of her disease.

One day, soon after we had carefully cleansed the uterus, her mother reported that she had discharged per vaginam, a half teaspoonful of pus. Where was this pus generated? Not in the uterus or vagina? Then the thought was suggested that it must come from a fallopian tube. Upon examination the tubes were quite normal, so far as we could ascertain. Again we were at sea. Subsequent examination disclosed the fact that the right tube was as large as a large lead pencil on one occasion, and on another it could not be felt. The deduction was inevitable—that the origin of all her trouble was a pio-salpinx, which discharged its pus at short intervals into the uterus. Hence the slight endometritis, which was constantly recurring after apparent cure through the poisonous action of the pus. We proposed the removal of the pus tube by laparotomy. At first the family refused consent on account of her extreme ema-

ciation and enfeeblement. But we insisted on the operation as her only hope. Assent was given. By request of Dr. Murphy I operated, he assisting me, and Dr. F. gave the anæsthetic. Her extreme emaciation made the operation the easier. I found the right ovary prolapsed and bound down by firm adhesions. I broke these up and brought the ovary to the surface together with the fallopian tube. The ovary was slightly larger than usual with two small cysts on it. The tube was about the size of a lead pencil, and contained a small amount of pus, thus verifying our diagnosis. The left ovary and tube were examined and found healthy and returned to their place. Her recovery was slow, but steady, and without any remarkable incidents, and has been so progressing ever since.

Now, six months after the operation, she weighs about 135 pounds, has menstruated several times, eats heartily, digests well. We are hoping she will become pregnant, believing that would complete the cure.

Query—Is such a form of pyo-salpinx a common occurrence? I do not remember seeing a report of such a case. Is it not probable that many cases of obscure disease may have this pathology?

Empyema; It's Diagnosis and Treatment, With Report of Two Cases.*

BY J. T. B. BERRY, M. D., BRANDON, MISS.

It is not the province of this short paper to discuss the pathology and etiology of empyema, nor in anywise to enter into a consideration of the causative influences which may operate to produce the disease.

I merely wish to call attention to and emphasize some of the means of diagnosis and treatment at our command.

DIAGNOSIS—The diagnosis is not difficult if we are on the alert, watching our patient closely during the acute inflammatory stage that precedes, making careful physical examinations often whenever there is a tendency to protracted illness in cases of pneumonia, pleuro-pneumonia, pleurisy or pericarditis.

It is not improbable that many cases of so-called typhoid-pneumonia which end fatally after a few weeks, or if they re-

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cover at all, do so after a tedious convalescence of many weeks, are in reality cases of empyema.

I do not mean by this to impeach the diagnostic skill of any practitioner, but merely to warn against that routinism and carelessness in examining our patients that many of us are prone to fall into, especially during busy seasons. In every such protracted case the first symptoms, as rigors, chilly sensations, followed by rise of temperature, acceleration of pulse and respiration, pain or soreness, loss of appetite, restlessness, sweats, etc., should be closely investigated and whenever an accumulation of fluid is suspected the exploring needle should be freely used. This little instrument here is invaluable and should be boldly and unhesitatingly brought into requisition.

Not the onset of every case is well marked by the prominence of the above symptoms; and it is these insidious cases that require especial vigilance.

TREATMENT—The indications for treatment in these cases are plain and consist in the sustaining of the natural powers of the patient and the thorough evacuation of the pus.

The means of accomplishing the first consist in a liberal supply of nutritious, easily digested food, such as milk, eggs, broth, etc., at short intervals; the administration of such medicines as aid in digestion and improve the general condition of the patient, as strychnine, iron, arsenic, etc.; attention to the secretions of the stomach, bowels, kidneys, liver and skin. The skin should be kept in good condition by frequent warm baths and change of linen, without undue exposure to cold and fatigue of patient. His surroundings should be bright and cheerful and he should be made as comfortable as possible.

The second indication, that of evacuating the pus, should be met by prompt, bold and decisive measures. Delay is dangerous and might prove fatal.

Aspiration is inefficient and should not be done. Nothing less than free incision and drainage should be depended upon.

If the quantity of pus in the pericardium or pleura is considerable, it should be evacuated slowly. It is perhaps as well not to insert the drainage tube the first day, and I believe it is better not to irrigate the cavity the first day. The tube should, however, be inserted not later than twenty-four hours after the incision is made and the irrigation begun then or next day.

After this the tube should be removed and thoroughly

cleansed and the cavity well washed out daily, using at first only sterilized water. After the first few days the wash should be medicated. I prefer to use Tr. iodine. The solution should be weak at first and gradually made stronger as the indications seem to demand.

Whether the fluid be in the pleura or the pericardium, there is no difference in the treatment. The tube is held in place by means of a safety pin and adhesive plaster. A liberal supply of gauze is then loosely placed over the tube and held in place by one or two turns of a roller bandage.

I deem it unnecessary to add that the most rigid asepsis should be observed during the opening and after treatment of these cavities.

Case I—A girl 7 years old, daughter of a farmer, had an acute attack of pleurisy. During second week there was some improvement in her condition, but it was only partial and temporary. There was a rise of temperature, acceleration of pulse and respiration, sweats and the usual signs of pyemia. The exploring needle revealed the existence of pus in the pleura.

The cavity was opened by a free incision in the axillary line in seventh intercostal space. Two tubes pinned together were inserted immediately after opening cavity. Irrigation was begun on second day and repeated daily for ten days. One tube was then removed and the other allowed to remain a few days longer. The iodine solution was used as a wash in this case.

Other measures, as a sustaining diet, tonics, baths, etc., were employed.

She made a very satisfactory recovery and is apparently now, four years after the illness, in perfect health.

Case II—A young man, aged 19, farmer, but had worked a good deal in printing office, had an acute attack of pleuro-pneumonia in February, 1898. This was his third attack of pneumonia. The disease was well developed, the entire left lung being involved.

His temperature ranged 103 deg. Fahr. to 105 deg. Fahr. Respiration about 30. Pulse about 120 per minute.

About the tenth or eleventh day there was a decided improvement in his condition. Temperature fell to almost normal, pulse and respiration declined in proportion. But his condition of improvement lasted only two or three days. He had a chill and temperature rose to 105 deg. Fahr., pulse to 140 and respira-

tion 40, and acute pain over region of heart followed. He had a well-defined pericarditis. In a few days temperature fell to about 100 deg., but pulse and respiration remained about the same. He soon began to have sweats and other evidences of pyemia.

The pleura was explored with needle, with negative results. Then the pericardium was carefully explored and pus found. A free incision was made in the fifth intercostal space, two inches from left border of sternum. A pint of pus emptied. A tube inserted on second day. Cavity washed out on third day and daily since until the present writing, which is thirty-eight days after the operation.

His condition now is fairly good with prospects of recovery in his favor.

Correspondence.

The Journal of the Mississippi State Medical Association :

Since my last correspondence the Shelby County Poor and Insane Asylum has organized a medical staff, consisting of a superintendent, two visiting surgeons, a rectal surgeon, an oculist, a pathologist and three resident physicians.

The city hospital is now quartered in the new and commodious buildings recently erected and costing \$25,000. The appointments are as perfect as modern sanitary science can make them. There are forced hot and cold draughts, steam sterilizer attached to laundry, and inside telephones all over the building, the pavilions connected with the main building which the latter also contains, a modern and complete operating amphitheater, which in point of beauty, finish and appointments is not surpassed by any hospital in the South. It was thought that a visiting staff would be appointed, but it seems now that only a consulting staff is in contemplation. Dr. E. Miles Willett, who formerly occupied the triple position at St. Joseph's Hospital of president of the staff, one of the visiting physicians of the medical department and one of the gynæcologists, has removed to Louisville. The vacancy on the medical staff has been filled by the appointment of Dr. E. M. Holder, Dr. W. B. Rogers was

elected to the presidency, while the place of gynæcologist is still vacant.

The medical college has gotten up at great expense a new chemical laboratory for physiological and pathological chemistry where daily exercises will be held in the practical examination of normal substances of the body, as well as diagnostic work, such as examination of the stomach contents, urine, etc.

We have a new medical journal, *The Memphis Lancet*, composed of a staff of ten editors who propose to get out a journal of very high order. No unethical preparations are admitted into the advertising pages.

President of the City Board of Health, Dr. Heber Jones, is building a detention hospital south of the city. Every precaution is being taken for complete quarantine work, which it is hoped will not be necessary. The annexed district which had been sewered when the annexation act was declared unconstitutional, is promised relief by the water works and city council coming together, and water connections will soon be made.

Many of our local physicians are off on vacations, others go this month and some have already returned.

Yours very truly,

Memphis, Tenn.

* *

DR. ROBERTS of Nashville, read an extremely interesting paper before the Tennessee State Medical Society, at its April meeting, on the subject of "Fever, Just Fever." The doctor sums up the situation as follows: "Yes, a continued fever, with its temperature above the normal, pulse rate and respiration accelerated, nutrition defective, elimination abnormal, marked tissue waste, thirst and loss of appetite, yet no local lesion or special complication other than that produced by accidental factors, or injurious medication in its initial stages." In the South we have many of these cases and to our mind the mistake all along has been in trying to make all of them either typhoid or continued malaria, while the truth is that there are fully three types, namely, the two above mentioned and a species of auto-intoxication, the exact nature of which we do not pretend to know, but which, however, offers a splendid field for investigation.

Editorial.

H. M. FOLKES, M. D., BILOXI, MISSISSIPPI,

Editor and Business Manager.

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SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

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MOST distressing accounts come to us from Chickamauga as to the condition of affairs in the United States military hospital there. Before proceeding to enumerate some of them we will state that our information is believed to be absolutely correct, as it comes from a letter written by one in a position to know, being in an official capacity there. In this letter it is claimed that not only are there not enough doctors and nurses, but not sufficient medicine and actually not enough clinical thermometers to prop-

erly handle the cases, of which there are nearly 100 typhoid patients. He says he fears a dreadful mortality among these poor boys. Now, who is responsible for this state of affairs? It does not become us to pass judgment upon any one before all the facts in the matter are known, but we must say that from a first examination it appears that the medical department of the army has not been equal to the emergency. Every feature of this war should have been worked out and details on file in the office of every department commander in the service. We will wait and see what the gentlemen in charge have to say anent this most important subject.

* * *

WE have seen it stated in the daily papers that 1,000,000 quinine pills have been sent to the army in Cuba. We suppose they will be used as ammunition for that is about all they will be fit for. Quite an extended experience in tropical practice teaches us that the best way to give quinine in hospital practice was in solution, while in certain cases the hypodermic method was absolutely essential.

* * *

WHILE speaking about practice in the tropics, it occurs to us to call attention to a fact which we have seen nowhere noted, and that is in regard to keeping the abdomen covered during sleep. On numerous occasions we have seen quite severe cases of bowel troubles follow exposure of that portion of the anatomy in the night time.

* * *

SOME observer has already called attention to another important fact, and that is keeping the feet dry. This may appear a small matter, but experience has taught us its value.

* * *

MUCH has been said about eating the fruits so plentiful in the regions where our soldier boys are going. The truth is that it is best for new-comers to abstain from all kinds except oranges, limes and lemons, and these to be used in moderation. We have seen a negro die from eating too many bananas.

* * *

A MOST gratifying feature about the war has been the success which the surgeons have had in their work, not alone on the

hospital ships but also in the field hospitals. We are anxiously awaiting a report in extenso as to the wounds made by the small calibre guns.

* * *

MUCH depends on the health officer of Florida this summer to protect us from a great probability of an introduction of fever among the sick and wounded soldiers being brought home. For our part we wish to say right here that if there is any man in the United States who can do it, it is the able sanitarian who now holds the reins, Dr. J. Y. Porter, State Health Officer.

* * *

A FEVER said to be typhoid has made its appearance in almost every encampment of the soldiers and is having quite a large percentage of deaths. Just why it should be so extensively prevalent is so far unknown. It is to be hoped that the medical men of the army will make a careful search as to causation and point of origin, if possible to do so.

* * *

SOMETHING in common between people always creates a sympathy, which if rightfully treated results in good. Past experience teaches us that one of the worst features in handling the masses during epidemic times, is the utter lack of knowledge bearing upon the subject, be it yellow fever, small-pox or what not, among those who should know better. People will talk about sickness and all things connected with it for the very good reason that they are directly concerned. Now after hearing the average individual talk about an epidemic disease, or any other kind for that matter, you will find that his or her ideas were very probably the accepted medical teaching in years past, and that he had not kept up with modern medical thought and practice. So long as people will talk (which will be until time shall be no more) to our mind it should be our duty to inculcate in their minds the truth about subjects medical, so that when occasion arises the larger proportion of them will be in a position to appreciate what you are trying to accomplish. In all public schools children of the higher grades, say the ninth and tenth, should be taught the essentials of anatomy, physiology and hygiene. The last should embrace a series of practical talks on the natural history of epidemic diseases, showing the results of scientific

methods in exterminating some of them and brief outlines of the measures adopted. We are fully aware of the dangers attending a little knowledge, but far more accompanies none at all. This topic handled along these lines, entirely avoiding any reference to symptoms, treatment, etc., will have a tendency to make the pupils familiar with the fact that scientific medicine requires more knowledge than they possess, and will direct their thoughts to a conviction that they should have skilled medical assistance rather than trust to ignorance.

* * *

MURPHY'S paper before the American Medical Association, at the recent Denver meeting, on the "Surgical Treatment of Tuberculosis," was of absorbing interest, and if his conclusions are correct, as is devoutly prayed they may be, this century has seen the greatest stride that medicine has ever made. For while many of the diseases to which flesh is heir to appear to be getting milder, consumption spreads its octopus arms in every direction and has no mercy. We shall see what we will see.

* * *

THE type of yellow fever now prevailing among the troops in front of Santiago is enough to give our friends, who so persistently denied that we had yellow fever last year, a pain. If a few more of them don't die, the conclusion will be inevitable that they are having a variety of the "fifty thousand dollar fever," and not pure yellow fever, in which everybody dies, including the narrator.

For tri-facial neuralgia Dana recommends single daily doses of strychnine-sulphate, beginning with one-thirtieth of a grain and gradually increasing to one-quarter at the end of two weeks. He also employs potassium-iodide and chloride of iron with enforced rest in bed. This line of treatment has been productive of extremely good results in the hands of many practitioners.

Public Health.

RESUME OF McHENRY YELLOW FEVER OUTBREAK, 1898.

—First case on May 20. Local physician inexperienced in yellow fever and failed to diagnose. Dr. Haralson received notification June 7 from resident who had not had the fever. Haralson arrived in McHenry on morning of 8th and made diagnosis. Diagnosis confirmed by Murray and Folkes on 9th. Cordon on within an hour of confirmation. Carter and Gill arrived on 10th. Gill confirmed diagnosis; Carter saw no cases on first visit. Archinard found reaction in the four specimens sent for examination. Diagnosis positive. Total cases, 26; deaths, 0. Last case developed on June 28. Last case discharged on July 9. Cases on hand, 0; days since last case developed, 13. Last focus developed June 22. Foci to date, 9; existing foci, 0. Houses burned, 6; three known to have been infected, others suspects only; among number burned was ice house, suspected primary focus. Foci established since June 9, 3. Number of refugees from McHenry to Fontainebleau, 80; number of refugees developing fever at camp, 0; number slipped through cordon, 6, all of whom were either brought back, kept under guard or sent to Fontainebleau. No case was carried through cordon; that of Breeland developed before cordon was established. Cases outside of McHenry, 0. The Eucutta case was one of secondary fever and had left McHenry before fever was known to exist. No case at Perkinston; reaction probably due to having had the fever last year at McHenry; had since moved to Perkinston. Suspect at Bond said by Carter and Stone probably not, said by Haralson and Murray positively not to have been yellow fever. Fifteen men boarding at house developed nothing; house burned. Houses guarded and disinfection begun as soon as inmates were convalescent. Population at beginning of outbreak, 323, of which 70 were immunes. Inspectors sent to each house every morning to see that all were in town. Special camp for twenty-three turpentine workers established; eight guards had them in charge; nothing developed among them. Day light communication, in shape of switching, at first permitted; was violated by crew in working one night from 8 to 12. Crew put out of Gulfport and relays established at Maxie on the north, and Landon

on the south, a distance of forty miles, forming the neutral territory. This territory has been inspected daily since July 11, with absolutely negative results. This is the territory to which I called attention as being the point from which people were coming into Gulfport. Cases developing after June 20 put into tents, and the houses from which they came at once disinfected. Disinfection by Formaldehyde. Bedding, heavy, burned; light, boiled, and put into 1-500 bichloride solution. Work of Carter and Haralson most brilliant in annals of yellow fever. Fact of eighty people being carried from a town where infection existed and none of them developing it, proves the absolute effectiveness of the house quarantine maintained. To further prove President Souchon's assertion correct, that the coast was not infected, may be instanced the fact that the crews of both freight and passenger trains daily intermingled with people in all towns along the coast and not a single man in any of the crews became infected.

Presented on request of President Souchon to the Louisiana State Board of Health, July 11, by Dr. Folkes of Biloxi.

* * *

The quite often ill-effects of vaccination, together with the type of small-pox which has been epidemic in Alabama and certain portions of this State, has driven not a few to the conclusion that it were better to have this small-pox than to be vaccinated. It has been stated that the mortality in Alabama has been one and two-fifth per cent. We doubt if it has been that much in this State, so far.

Abstracts and Extracts.

METHOD OF GIVING MERCURY IN SYPHILIS.—Fournier, in *British Medical Journal* from Sem. Med., June 30, 1897, rejects fumigation, baths, mercurial plasters and other such methods as being scientifically obsolete, and gives the three possible methods of to-day as 1, internally (by the mouth); 2, inunction; 3, hypodermic injections, with the following advantages and disadvantages for each:

Advantages of ingestion are—1, ease of administration; 2, well tolerated; 3, proved activity.

Disadvantages of ingestion are—1, may upset digestion; 2, can only use moderate doses, heroic ones causing intestinal irritation; 3, does not interfere with administration of other medicines.

Advantages of inunction—1, very active; 2, only occasionally disturbs digestion; 3, does not interfere with administration of other medicines.

Disadvantages of inunction—1, the trouble of applying; 2, seecrey difficult; 3, likely to occasion stomatitis; 4, curative effects variable, according to thoroughness of administration.

Advantages of injection—1, active and easily regulated; 2, does not disturb digestion; 3, stomach free for other agents; 4, if occasional large injection, remarkably active.

Disadvantages of injection—1, dangers of local complications; 2, pain (sometimes very intense); 3, trouble of regular administration.

His conclusions, briefly stated, are as follows:

1—As to patient himself—If robust, use ingestion; if cachectic, avoid it; if detention bad, use ingestion, inunction and large doses by hypodermic injection being contra-indicated. Avoid injection in day laborers, may interfere with their means of support.

2—As to kind of syphilis—Roughly stated, treat ordinary cases by ingestion; more severe ones by inunction, and the worst by injection.

3—As to object of treatment—If for particular symptom, use any method best adapted for case in hand; but if for cure, ingestion, occasionally interrupted, but lasting for years, is the best of all.—(*Nashville Medical and Surgical Bulletin*).—*Pennsylvania Medical Journal*.

We find, briefly, that immunity can be conferred against a great variety of substances of animal, vegetable and bacterial origin. This immunity may be produced by feeding the poison, or by injecting it sub-cutaneously or intra-venously; it can be taken from one animal and administered to another to the tissues in their efforts to prevent the entrance of disease organisms, or to destroy such organisms after they have gained access to the citadel of life. The immunizing substance is found to be present in varying quantities in the different fluids and organs

of the animal body, but at present we are unable to say in which this protecting substance is formed. Much of the recent work shows that the white corpuscles have a great deal to do with its production.—HOUGHTON, "Antitoxic Serums," *Buffalo Medical Journal*.

* * *

Beginning with the bacteriology of the bacillus icteroides, it may be said that the microbe is related to the colon group and resembles the bacillus coli commune in shape, size, arrangement, flagellæ, etc., admitting that the latter is quite polymorphous, a character shared by the bacillus icteroides, Sanarelli describes it as a little rod with rounded extremities, 2.4mm in length and $\frac{1}{2}$ to $\frac{3}{8}$ as broad. The specimen exhibited here would lead the casual observer to suppose that he was looking at a staphylococcus. It is a facultative anaerobe, actively motile, flagellate, stains with Gram's method, ferments insensibly lactose, more actively glucose and saccharase, but does not coagulate milk; it does not produce indol, is very resistant to drying, and can be frozen without injury, but dies in water at 60 deg. C., or after being exposed for seven hours to direct sun's rays it lives for a long time in sea water. It is most readily differentiated from the typhoid and colon by Gram's stain. It grows on all the ordinary media. In common gelatin it forms rounded transparent, granular colonies, resembling leucocytes in the first three or four days. Then the granulation becomes more pronounced, showing a nucleus, central or peripheral, until finally the colony becomes entirely opaque, but the gelatin is not liquified. It grows quickly in bouillon without forming a pellicle or deposit. On blood serum its growth is almost imperceptible. On agar-agar, under prescribed conditions, the growth is diagnostic. By growing twelve to sixteen hours in the incubator, and then the same length of time at 20 deg. C., the colonies appear with a flat central nucleus, transparent and azure, having a peripheral circle prominent and opaque. The microbe of yellow fever is pathogenic for most domestic animals; all animals experimented on were more or less susceptible, but birds are completely refractory. Anatomically and nosologically the analogy was greatest in dogs.—KRAUSS, "Yellow Fever, Cause, Prevention and Cure," *Memphis Medical Monthly*.

EGGS IN THERAPEUTICS.—A mustard plaster made with the white of an egg will not leave a blister.

A raw egg taken immediately will carry down a fish bone that can not be gotten up from the throat.

The white skin that lines the shell of an egg is a useful application for a boil.

The white of an egg beaten with loaf sugar and lemon relieves hoarseness—a teaspoonful taken once every hour.

An egg added to the morning cup of coffee makes a good tonic.

A raw egg, with the yolk unbroken, taken in a glass of wine is beneficial for convalescents.—*Georgia Journal of Medicine and Surgery*.

* * *

NEPHRITIS OF MALARIAL ORIGIN.—At the Thirteenth Annual Meeting of American Physicians, Dr. Wm. S. Thayer of Baltimore, read a paper with this title, in which he referred to the frequency of albuminuria in malarial fever.—*Medical Record*. In looking over the statistics in his own cases he had found that a large proportion of cases of malarial fever had albuminuria and casts, but principally the cases of æstivo-autumnal fever. Of 758 cases of malarial fever there were albuminuria in 321 and casts in 120. Albumin was present in nearly one-half the cases. He had had 19 cases of acute nephritis of malarial origin. He had found in general that his own statistics agreed largely with others he had collected, except in some few cases. In scarlet, of course, a certain number of cases of albuminuria and casts, also in diphtheria and typhoid fever. Albumin was probably present in about one-half the cases of scarlet fever, and malaria seemed to be the cause of more cases than was generally supposed, but not so often as in yellow fever, and for this reason we could not place too great reliance on the presence of albumin in yellow fever. In 152 cases of nephritis, 7 were tertian, 10 æstivo-autumnal, and 3 of varied type. There were 13 recoveries and 4 deaths; 9 cases were doubtful. The speaker also gave statistics of the age, sex and color in these cases. He thought there was a possible etiological relation between nephritis and malarial infection.—*Charlotte Medical Journal*.

* * *

LIFE EXPECTANCY OF SYPHILITICS.—James N. Hyde, in *Medical Examiner*, comes to the following conclusions:

1—Inherited syphilis is one of the most fatal of all disorders affecting the human race, and under the most favorable circumstances, irrespective of abortion and miscarriage, nearly 90 per cent. of children born living subsequently die.

2—Acquired infantile syphilis is very rare, is an exceedingly manageable disease and is one in which probably a large proportion of all infants survive.

3—Between 80 and 90 per cent. of all adult patients affected with acquired syphilis escape its gummatous complications.

4—The percentage of patients affected with gummatous syphilis who perish is not known, but one may doubt if it exceeds 2 per cent. of from 10 to 15 per cent. of those who suffer from gummatous complications.

5—The expectancy of life is probably not affected by coincidence of syphilis with other diseases, and the prospect that the patient with acquired syphilis will ever suffer from struma, tuberculosis or cancer is exceedingly small.

6—The natural evolution of acquired syphilis in untreated cases in the adult is not in the direction of a lethal issue, but rather in the line of physical degeneration and grave complications due to involvement of the nervous system and the bones without affecting organs essential to the continuance of life.

7—It is unfair to charge an extra risk for the insurance of syphilitic applicants otherwise in sound health and insurable, as any assumed unfavorable longevity prospects due to the fact of infection are more than counterbalanced by the extreme improbability of death from either tuberculosis or cancer.

8—If what precedes has a fair foundation in fact, it follows that the syphilitic applicant for life insurance should be examined with a view not so much to his syphilitic history as to his condition with relation to all the items making up satisfactory risks. In other words, if he has a good family history, a sound constitution, excellent habits, and has reached, but not passed, a satisfactory age, his expectancy of life is probably that of other individuals in similar conditions without added risk in consequence of his specific disorder.—*Charlotte Medical Journal*.

CAUSES OF SUBNORMAL TEMPERATURE.—Dr. Janssen, in the *Medical Record*, sums up the causes of this condition as follows:

1—After the direct withdrawal of heat from the body, as in cases of exposure of unconscious or drunken persons in a very cold atmosphere, or after immersion in very cold water.

2—After the loss of great quantities of fluids from the body, as in severe diarrhœa, enteritis, cholera or profuse hemorrhage.

3—In conditions of cachexia and inanition, such as cancer of various parts of the alimentary canal, severe forms of diabetes, pernicious anemia, during convalescence from febrile affections, and in many chronic mental diseases.

4—In grave circulatory disturbances, as in cardiac failure.

5—In various diseases of the central nervous system, in tuberculous meningitis, at the onset of cerebral hemorrhage and embolism, in some cases of brain tumor and in general paralysis of the insane.

6—After irritation of sensory nerves, as in intestinal strangulation in renal and gall stone colic, internal perforation of the intestines, etc., and after surgical operations.

7—In skin affections involving large areas, such as scleroderma and extensive burns.

8—After fevers, when the temperature may long remain subnormal, or in the course of certain fevers, as in pyæmia.

9—In cases of poisoning by phosphorous, atropine, morphine, carbolic acid and in alcoholic intoxication; also, in the auto-intoxication of uræmia and in diabetic coma. In some healthy persons subnormal temperatures are occasionally without any apparent cause.—*New York Polyclinic.*

THE EHRLICH DIAZO REACTION.—Solution 1. Acidi sulphanilici, 5; acidi hydrochlorici pur., 50; aquæ destillatæ, 1000. Solution 2. Potassii nitrosi, 0.5; aquæ destillatæ, 100. Take fifty cubic centimetres of solution No. 2, add equal parts of urine and one-eighth volume of ammonia; shake thoroughly. The rose-colored froth proves the test.—KLEMPERER, in *Medical Record*, from *Southern Practitioner*

Medical News and Miscellany.

Science has conquered and to-day, so far as known, the South has nothing to fear from a fever recrudescence. McHenry was released on July 23, and again throws its doors open to the world. The Mississippi State Board of Health and the Marine Hospital Service working hand in hand have done a work destined to stand as a model for sanitarians in the years to come.

However, it is fondly believed that with the taking of Cuba the reign of Yellow Jack is over so far as the United States are concerned.

Dr. Tackett has been ordered to Santiago to treat yellow fever among the troops. If newspaper reports are to be believed he will find a smaller mortality among them than he encountered at Miami with typhoid.

Subscribers in arrears are hereby notified that they will be dropped from our mailing list if amounts due are not remitted to this office by August 15.

It is with most sincere pleasure that THE JOURNAL learns of the bright prospects for the next session of the Institution for the Blind. Some of these days will be written a history of the dastardly attempt to wreck this noble institution. Under the able management of Dr. Sims we believe the school will take front rank among similar institutions in this country. We urge upon the profession throughout the State that they lend their aid to the doctor in the upbuilding of the school.

DR. KEATING BAUDUY.—I will endeavor to respond to the questions propounded. Dr. Stoffel wants to know if the dietetic and hygienic measures alone being adopted would not have effected a cure in the cases reported. I will state that in many of these cases we have tried other preparations of iron and with rather negative results; and in all these cases we have observed hygienic and dietetic indications without obtaining these remarkable improvements. Now I do not wish to be understood that this remedy is a panacea; I merely give you the data and clinical

facts and the results of the microscopic investigation, and you can take them for what you believe them to be worth. I will answer Dr. Fairbrother by saying that I presume that this is a proprietary remedy, but I use a good many other proprietary preparations. I use antipyrine, and I suppose the doctor does; I use phenacetine, sulfonal and other such proprietary remedies, and I will tell you candidly, gentlemen, that I use whatever I find benefits my patients. Of course I do not propose to use nostrums or remedies of which we know nothing about their composition. But the Gude preparation of iron does not belong to this class; a great many gentlemen here use it; I use it because it is the best remedy that I have obtained for the treatment of these cases.

THE PROMPT SOLUTION OF TABLETS.—We are glad to know that the Antikamnia people take the precaution to state that when a prompt effect is desired the Antikamnia tablets should be caushed. It so frequently happens that certain unfavorable influences in the stomach may prevent the prompt solution of tablets that this suggestion is well worth heeding. Antikamnia itself is tasteless, and the crushed tablet can be placed on the tongue and washed down with a swallow of water. Proprietors of other tablets would have had better success if they had given more thought to this question of prompt solubility. Antikamnia and its combination in tablet form are great favorites of ours, not because of their convenience alone, but also because of their therapeutic success.—*The Journal of Practical Medicine.*

Messrs. Tilden Co., New Lebanon, N. Y.—Gentlemen: I have been suffering for two days from an acute attack of neuralgia, very severe at nights, and this evening decided to take an antiseptic, and accidentally came across a small sample bottle of your liquid antiseptic, and one single dose had a marvelous effect, and no after-effects as I usually have after taking acetanilide, a drug I always hesitate to prescribe. Please send me a liberal sample and I will try it in some cases, besides giving some to some physician friends.

I am faithfully yours,

JOS. C. THOMPSON, M. D.

My experience, therefore, with Viskolein has satisfied me that it merits a very high rank among remedies for arresting the progress and destructive action of septicæmia, pyæmia and kindred maladies. I have also had a large experience with its use in the acute infectious fevers, including in my treatment, however, its use in tablet form, the tablet unlike the hypodermic and capsule, containing a non-depressant phenyl-caffeine derivative. That experience encourages faith in its power to exercise a marked controlling influence on the heat centers, thereby lessening materially degenerative changes so prone to occur as the result of high and prolonged temperature which constitutes so important a symptom to be met and overcome in this class of cases. Possessing in its composition the stimulative quality of kola, it is especially indicated in low types of fever, and the tablets may be more safely administered for heat reducing effect than the other well-known coal tar preparations so generally used for the same purpose.

The hypnotic effect of Bromidia does not by any means represent the sole benefit to be derived from this preparation, but it meets, in a very perfect manner, many other indications involving hyperæsthesia of nerve tips and over-excitability of spinal cord. In doses of one-half teaspoonful, given every four hours for two days, will so benumb the sensory nerve tips of the buccal cavity that dentists can take impressions of the mouth, fit in rubber dams, etc., that would otherwise be impossible on account of the gagging peculiar to some patients. In the hands of the medical practitioner, given in half-teaspoonful doses every four hours, will make life endurable for hay fever patients during the months of August and September. A teaspoonful will completely quiet the paroxysmal pain following childbirth or miscarriage without in any way interfering with uterine contractions.

The Journal

.....of the.....

Mississippi State Medical Association.

VOL. II.

SEPTEMBER, 1898.

No. 6.

Original Articles.

Precis; Or, Hygienic Measures to Be Taken When a Town Is Infected With Yellow Fever.

BY H. R. CARTER, SURGEON, M. H. S.

In general, on the credible report of yellow fever, or suspicious fever, at a place, steps should at once be taken to prevent people and goods from that place leaving it. This should be done pending investigation, which should be immediately made and the quarantine proclamation should announce that it is temporary and only until investigation is made. For this time, however, the prohibition should be absolute (save possible for those certainly going to places incapable of infection by yellow fever and to remain in such places). This is necessary because one case reported may mean a thoroughly infected town, and the exodus almost certain to take place on the report that an investigation is being made, may do irreparable damage. With this had best be also included (in partial quarantine at least) such places as from communication with the quarantined place would naturally share its infection should it be infected. Thus a quarantine (temporary) of Biloxi and other coast towns had been advisable when fever was reported at Ocean Springs.

I say "in general" because there are conditions in which this is inadvisable.

1—When the case reported is reported as an "imported"

case" *i. e.*, is believed to have contracted infection elsewhere and is reported early.

The presumption then is that there is no focus of infection in town and if this be true quarantine is unnecessary. An example is the DeVilla case in New Orleans in 1889. This man contracted yellow fever in the tropics, Livingston, I believe, and developed it in New Orleans (or en route) and died in New Orleans on October 3, 1889.

It was obviously not contracted in New Orleans; its presence showed no focus of infection there and quarantine on account of this case was unjustifiable. Similarly the Gelpi case of 1897, obviously contracted in Ocean Springs, gave no sufficient reason for quarantining New Orleans, although the known communication of New Orleans with Ocean Springs I think did justify partial quarantine, independently of the report of any case.

An example showing where this rule had led to error, however, is afforded by the Branham case of 1893, at Brunswick, Ga. This case was reported and believed to have contracted fever at the quarantine station and was brought to Brunswick. If this were true this sickness was no evidence of focus of infection in Brunswick and hence no absolute quarantine was laid pending investigation—only an inspection quarantine was put on to prevent persons going by common carriers from Brunswick to infectible towns south, Savannah, Jessup, Jacksonville, etc. On investigation three other cases were found, and on the finding of the second case an absolute quarantine was laid. In the meantime people had driven out from Brunswick to country places nearby, and indeed to some distance, and from one of them Jessup indirectly received its infection.

What credence to give to the reported origin of a case of yellow fever reported in a town prior to a full investigation is often a serious problem. But the consequences of delaying action, should immediate action be needed, are so deplorable that if doubtful a temporary quarantine should be laid.

2—When the town is large.—There are three reasons for this:

(a)—The chance of a large town having much infection in it with the report of the first case is minimal, and is not possible if the health officers act in good faith.

(b)—An exodus from the investigation is little apt to take place from a large town. It is certain to do so from most small

towns and the town being (proportionately) less infected, such exodus as might occur is less dangerous.

(c)—The loss occasioned by the quarantining of a town is in direct ratio to its size and the length of time it is maintained, and as the time required to make a satisfactory investigation of a large town is considerable, and may be very considerable, the loss from absolute quarantine of a large town pending investigation would be very much greater than for a small one (probably about as the squares of their population).

It seems then that to omit the quarantine of a large town pending investigation is less dangerous, and to institute quarantine more injurious than in the case of a small one, and I think in general quarantine should not be imposed on a large town pending investigation.

INVESTIGATION.

Having determined on the diagnosis of the reported cases we should, if they be found to be yellow fever, find out—1, the source of infection; 2, the amount of infection; 3, who has been exposed to that source or to the foci (presumably established by sick in town).

The determination of the first may enable us to pronounce the case an imported one and possibly relieve the town from quarantine. It may enable us to suspect a focus of infection in an unsuspected town as the case reported by Holloway in Louisville in 1897 led to the investigation of Ocean Springs, Miss.

1—Yellow fever in a resident (as in a new comer from a place where no yellow fever exists) is strong evidence of a focus of infection in town and hence of other cases.

2—At the same time an investigation of other cases of fever in town should be made to determine their nature. A rapid examination of the mortuary reports for the past six or three weeks—a more complete examination may be made later and such diagnosis investigated as fatal cases of yellow fever are liable to be reported under. This is especially necessary if the source of infection be unknown. Following the preliminary investigation a careful house to house inspection is for a small town always to be instituted.

3—While investigating the source of infection and determining the existence of other foci or cases in town, we must find the location of all who have been exposed to infection, whether from

the original source or foci of infection and to the (possible) infection of the premises of the sick. These are the "suspects."

This is a most important and difficult inquiry, and the success of the measures, if it be suppressible, depends mainly on its thoroughness.* In this connection it must be remembered that the infection of yellow fever is transmitted a little way aerially, especially down the prevailing wind, and there are instances of the measures above described proving futile because the residents of houses adjacent to the infected premises were not counted exposed and kept under observation. It was partly to a careful watch of the houses to the leeward of the infected premises that the suppression of the yellow fever at Franklin, La., in 1897, was due.[†] How far infection can be conveyed generally may be a question. Melier's celebrated case at St. Nazaire, in 1861, I think, reported to have contracted at a distance of 220 metres, and the writer reported a case in 1891 where the apparent source of infection was a measured 70 fathoms distant. Still these cases are altogether exceptional, and it is so difficult to eliminate all possible chances of infection that it may be that the apparent source of infection in both of these cases was other than the one considered by the reporter.

There is no question, however, that infection is not infrequently taken from a focus across an ordinary street, and in my experience this is about as far as it is transmitted.

CONDITIONS WHICH DETERMINE QUARANTINE.

As soon as the nature and extent of the infection and the measures to prevent transmission of the disease in the town are sufficiently determined, we can determine on the measures of quarantine, if any, which should be adopted against the town.

The first question to be determined, is, does the place require quarantine, or shall that put on, pending investigation, be raised?

(a)—If the disease be certainly confined to a few houses and all who have been exposed to possible infection be known, and this house or houses and all exposed to infection, be under guard and sanitary supervision, *i. e.*, "in quarantine," quarantine

*The writer has on two occasions found that the laundress to whom the soiled clothes of the patient had been sent, had not been considered in enumerating those exposed to infection. Hence inquiry must be made of those and all other articles leaving the house since the sickness began.

[†]In the town of Franklin every physical condition against controlling the fever seemed to exist and yet it was controlled.

against the town may be raised. If in doubt, whether all who have been exposed to infection are under observation, it will be necessary to wait some time, greater than the maximum period of incubation of the disease before doing this, and if no cases arise in the town we can lift the quarantine. Proper precautions to prevent infection from every possible focus having been observed. This, of course, is equivalent to hold the whole town under observation (in quarantine) and implies a careful and frequent inspection.

(b)—Similarly, if the disease be confined to a portion of the town, and this portion can be efficiently isolated from the remainder, this may be done and this clean part of the town used as a detention camp and after the period of incubation has passed, there being and having been no fever among the residents, they may be released from quarantine.

Since the release of these people from quarantine depends on no fever developing among them, a most careful inquiry for those of them who have been exposed to infection should be made and these should be removed from this part of the town.

Care must be taken with clothing, etc., of these people, not only to prevent them carrying possible fomites out of the quarantine, but to insure that they are not exposed to infection from fomites while they are undergoing their detention. To require the disinfection when they leave of the clothing which they take with them, is wrong in principle. If this stuff or any in the house be infected, these people are continuously exposed to infection and should not be released.

If it be not infected disinfection is not needed. By going through the premises carefully when the isolation is begun we can very generally determine if there be anything in the house which requires disinfection, and if there is it should be disinfected.

It was on this principle that in 1897 the Camp Grounds and Heartsease Park were isolated from Biloxi, with which they form almost one town, and the residents given pratique after ten days. The same was done in 1893 about Waynesville, Ga., and in both cases a considerable number of people relieved from quarantine restrictions with safety.

It is thus seen how the quarantine laid against a town pending investigation will be modified both by the amount of infection and by the sanitary measures taken and the fact that it will

be so modified is an added inducement to the town to take proper sanitary measures.

COMPLETE QUARANTINE.

I do not propose to discuss the methods of putting on a general quarantine against a town, as the problem varies ad infinitum. Whether a cordon forbidding all direct egress of persons, etc., be established, or whether it be limited to guards on the general lines of travel, including dirt roads, or simply to railroad and water craft will depend, as will the degree of communication authorized on local conditions. The first, of course, should give the most security. For a large place it is generally impracticable, owing mainly to the territory immediately surrounding a large town, maintaining direct communication with it, either unlimited or surrounded by certain safeguards as "day-light communication." This makes the extent of territory exposed to infection too large to be surrounded by a cordon. Whether this direct communication should be permitted by the health authorities depends on the risk of spread of infection on outside of (and in) this "neutral territory," and must be decided on its own merits for each case. It increases this risk.

A word about "day-light communication." Briefly—This is direct communication with an infected town. Persons being allowed to visit it during the day time—hours generally 10 to 4—under pledge to enter no residence, attend to their business and come home. People living in the infected town are not allowed to enter the clean one and certain classes of (or all) merchandise are barred.

It depends on two principles:

First—That the infection of yellow fever is mainly confined to the habitations of men and their environments.

Second—That the disease is not liable to be contracted in the day time.

The first is unquestionably true, and in towns which have a business district distant, and at a considerable distance from the residence portion, there is extremely little risk of infection in the business portion of the town, night or day, unless the infection of the town be very general.

The second is, I think, true to some extent, and if "bright, clear day out of doors" be substituted for "day time" probably to a very considerable extent. Still, most of the evidence brought forward to establish this point involves the first also.

The fact remains that people entering a town infected with yellow fever, for business only, coming in after the sun is high and leaving before the late afternoon, rarely contract fever. The instances, however, where communities allowing "day-light" communication have received infection are not rare, and while we (and they) generally explain it by showing that it was some carelessness or bad faith of the person who brought the fever; still the fact remains, and places holding such communication for a long continued period will frequently become infected. In proportion as this privilege is confined to reliable business men, to short hours, clear days and rigidly supervised, it is safe (or rather little dangerous). Women are prone to visit friends. The detail is easily worked out.

As a general principle in quarantine operations the guards are most efficient if taken from the country, to be protected, rather than the town quarantined, although we always desire to make all possible expenditures among the people of the town, because they need it.

WORK IN THE TOWN.

The question here is "Can the fever be suppressed?"

(a)—If there be few foci in town and they be known there is good chance of suppressing the fever. If in addition all who have been exposed to infection are known and can be properly provided for, this chance is much increased and we can usually attain success.

Thus at Cayuga, Miss., in 1897, Dunn found two foci of infection. Those who had been exposed to infection were in thirteen other households. These were kept under observation. In five no fever developed in ten days and they were released; in the remaining eight fever developed and went more or less through the households. Proper and efficient sanitary measures of isolation and disinfection were taken and there was no further spread. Similarly at Franklin, La., although the problem was more difficult, as it was not possible to determine all who had been exposed to infection, and yet by similar measures and careful inspection the same result was attained as also at other places.

(b)—If the fever be confined to one section of the town, even if pretty general therein, it may be possible to so isolate that part as to preserve the remainder.

This was successfully done in 1897 at Clinton, Miss., by Waldauer and Mayor Coleman. A cordon was placed about the infected portion of the town and the disease was confined to houses—about seventy-three cases. The remainder of the town, about two hundred or three hundred houses escaping. This work and at Cayuga by Dunn, mentioned above, must be characterized as brilliant.

PATIENT.

The patient should, if possible, (it generally will be impossible,) be moved to an isolated place, or a well-appointed hospital. We can practically always keep such a hospital from becoming infected, and the infection of an isolated place, should we fail to prevent it, is little dangerous.

How much risk should be borne by the patient and how much by the community is a question which the health officer must consider in advising removal. In general removal during the first forty-eight or sixty hours prior to the "stage of calm" is not specially injurious. We habitually remove the sick from vessels during this time and they get well. After that time it is to be deprecated.

PREMISES—WHERE PATIENT IS TREATED.

If moved all possible precautions to prevent infection of his new quarters must be taken, and I believe we can very generally succeed. If he is not moved precautions to prevent infection of the premises are even more necessary. They will be less successful.

Cleanliness, dryness, good ventilation and sunshine are all important. No fabrics, carpets, hangings, etc., not absolutely necessary, should be allowed in the room. The clothing, bedding, etc., which go with him, if moved, must be immediately disinfected. A rubber sheet to protect the mattress must be on the bed. The bed linen and shirt must be changed daily, oftener if soiled. The rubber sheet changed when necessary. All fabrics used about the patient should go immediately in the room into an antiseptic solution. The floor is to be wiped up daily with a similar solution. All excreta should be disinfected or de-

stroyed, and in short, every detail to prevent contamination of environment by the patient be carried out.*

The presence of intelligent trained attendants is necessary to carry out these measures, and no consideration of economy can be allowed to come in to prevent the establishment of a new focus of infection.

The above principles are to be observed in the premises in which the patient is treated, whether they be those in which we find him or those to which he is moved. They are to prevent infection or further infection. If he be treated in the house in which we find him—presumably infected before the institution of these measures—such measures as are possible to destroy the infection which already exists must also be instituted.

If possible, prepare a room for the patient by removing all superfluous fabrics, etc., and scrubbing it out with bi-chloride solution, on the upper floor, sunny, well ventilated and move him into it and keep it clean. Disinfect as well as can be done without disturbing the patient—and very efficient work can be done—everything possible disinfected, scrubbing all parts of the house, the late sick room with bi-chloride solution, disinfecting (or destroying) the used bedding, upholstered furniture of the room, etc., and keep the house, the sick room especially, open to sun and wind to the fullest extent as long as it is dry weather. Pay especial attention to the places where the excretions of the patients have been thrown, any soiled clothing that has been used about him, etc., and finally as much cleaning up and disinfection outside the house as can be done and may be needed.

The only town in 1897 until cold weather which could show a single case of fever without any spread was Perkinston, Miss., where a very careful disinfection was begun on the third day of the disease and a careful asepsis carried out to the end. The

*Observations by Archinard shortly to be published gave no cultures of the B. Sanarelli in the urine, or black vomit; rarely in the scrapings of the skin (face, throat and chest); more commonly in the exhalations and excretions of the mouth. As this bacillus is found in the blood it may be that blood from the gums was the source of contamination. That it was not found in the black vomit (blood) may have been due to its acidity. The feces were not examined, but from the similarity of the behavior in cultures of this organism and the bacilli of the colon group and the fact that abrasions of the intestinal mucous membranes, and hence the exudation of blood in the intestine are universal in yellow fever, it is highly probable (certain) that the feces do contain this organism in large numbers and are the main source of its elimination from the patient. One case in Franklin in 1897 is traceable very clearly to feces or urine of a yellow fever patient.

premises also were under guard. The work planned as above was carried out by Dr. Champenois of Perkinston.

If the patient be moved the premises are to be disinfected by immunes, who need only disinfect their clothing, hair, hands, etc., or, if this be impossible, by non-immunes, who must disinfect the same way and be treated like the original non-immune inmates of the house.

The house in which the patient is treated (unless a hospital, which we feel sure we can keep free from infection,) is to be treated until it is disinfected like an infected place, although we can frequently prevent its becoming so. It is to be put under guard and no ingress avoidable allowed. There is no theoretical reason why egress for short periods (hours) should not be allowed to those feeling perfectly well, if sure of the sterility of their clothing, hair, etc., and it would keep them in better health, hence less susceptible to infection, to take exercise. Yet owing to the willingness of people to take risks for their neighbors and the rarity of sustained carefulness in the laity, I would, in general, not advise this. Hence no egress; still there may be circumstances in which this may be allowed. It can be made free from danger by intelligent supervision.

The physician, if not immune, must take precautions not to establish a new focus should he develop the fever, regulating his disposition of himself on the hypothesis that he will develop it. He should especially not sleep at a house in which it would be objectionable for him to develop fever. It seems to me best that he should stay on the premises with the patient. In any case he should wear clothing little liable to convey infection—linen or other smooth clothing, or change it if he goes out. I know this is very seldom necessary, but sometimes it is, and if the patient be regularly attended through his illness, and much time spent in his room, there is a slight indeed, but real risk of conveying infection in this way.* These precautions are recommended only when there are very few patients and every real risk, however slight, is to be avoided.

*The writer believes (oral communication from Dr. Tarlton of Patterson, La.) that yellow fever was thus conveyed to Patterson in 1878, and considers it very probable (oral communication of Dr. Folkes of Biloxi,) that it was thus conveyed in one instance to a house in Biloxi, Miss. In both cases the physician believed to have conveyed the diseases had been long in the infected rooms (which were badly infected) and in prolonged intimate contact with the sick, his bed, etc., and indeed under the conditions usual with nurses, rather than physicians.

Until these premises are released from observation, they must be under guard; this has already been stated. These guards should be immune and precautions taken against the conveyance of possible fomites by them.*

If immunes are unattainable the guards must be under closer supervision, as they will be exposed to possible infection. They must sleep in the guard camp, be inspected twice daily, and other precautions taken lest they establish new foci if they develop fever. They should be, of course, as little exposed to infection as possible, and it is indeed generally nominal.

The premises of the patient and all things in them, including the patient and attendants, must be disinfected as soon as possible on his death or recovery, using the precautions about the disinfectors previously given. At what time during his sickness or convalescence a patient becomes incapable of infecting his premises I do not know, nor can I find any observations or even opinions on this subject, and yet it is a very practical matter for sanitarians.

The premises adjacent to those of the patient which from propinquity, communication or direction of wind can be infected.

DEPOPULATION.

In addition to these means to prevent infection of premises and failing this, to isolate them, a most valuable adjunct in suppressing yellow fever, existing under the described conditions, is depopulation of the neighborhood of the presumptive focus. How far this should be done is implied in the paragraph on aerial transmission of infection; but the wider and more completely (within limits) it is done, the better from a sanitary standpoint. Reasonable precautions are to be observed lest new foci be established by some of these people who have already been exposed to infection. (See "Disposition of Suspects.")

This depopulation, however, is meant to extend well beyond the distance to which fever may be reasonably expected to be aerially transmitted from the focus, the aim being to render the focus as isolated as possible for people. Indeed, a general depopulation of the town, safely done, is of much aid in suppressing the fever. In general, however, it is scarcely advisable.

DISPOSITION OF SUSPECTS.

Now the inmates of the house of the patient, unless immune

*Three instances have come to the writer's notice of foci of infection established by guards.

to yellow fever, should be removed from the house, all clothing, etc., disinfected and kept under observation, "quarantined" in a place free from infection and so situated that if any of them sickens he may not establish a focus of infection dangerous to the community, *i. e.*, either in locality insusceptible to infection as to northern points, Atlanta, Abita Springs, etc., or so isolated by distance and guards that its infection will do no harm to others (camp of detention). Indeed, it is not generally difficult to prevent such a place from becoming infected with yellow fever, if one has charge from the beginning, of a suitable place, even if fever develops among the suspects.

These people, if in an infectable locality, should be inspected twice daily until the period of incubation has passed, and if one of them sickens he must be promptly isolated from the remainder, or better, left where he is and the remainder isolated from him, and measures of disinfection taken. If in non-infected territory all this is unnecessary save for the purpose of treatment.

If it be impossible to remove the inmates to a place of safety (it should never be save by their own will) they must be quarantined in the house. This is bad; bad for them and bad for the community, because there is thus some risk of prolonging the existence of the fever in the infected house. Their own risk being optional, they must take it for the safety of the community. Here measures to prevent infection of the house previously inculcated are especially necessary.

It is to be noted that if the case be discovered early, time limits not definitely determined, the premises apparently are not yet capable of communicating infection to persons, and the inmates have not so far been exposed to chance of infection. This is a reason for their prompt removal and the statement one so often hears, "I had as well stay as I have been here — days" should never be allowed to weigh with health officers in allowing these people to ignorantly risk their lives.

Those who have been exposed to infection, not inmates of the patient's house, must also be provided for. If possible, they should be sent to non-infectible territory or to an isolated place, camp of detention,) and kept there under observation during the period of incubation of the disease, due care being taken that they are not exposed to any infection as by fomites carried in, while isolated.

If neither of these methods are practicable, they must be inspected daily, if possible twice daily at their own houses, and

measures, as before indicated, taken should they become sick.

There is no theoretical reason why these people may not pursue their ordinary avocations while well, as during the stage of incubation the disease is not transmissible, but there is every reason why they should not sleep away from home, fever very generally developing at night, and unless they be trustworthy, they had best be kept on their own premises. It is to be noted here, how rarely people taken from infected premises and placed in camps, or under the conditions of camp life, develop fever. Whether it be the relief from anxiety or the open air life, the fact remains that the development of fever among people in camp is far less common than among an equal number isolated in their own houses.

Measures of this kind are taken for the purpose of preventing further development of the fever—"to stamp it out." They certainly give a fair chance of success if the early cases are reported. Failing this they will greatly retard its rapidity of spread and will have done good in proportion to the lateness of the season. Indeed, if the season be very late, it may be advisable, in spite of all that will be said presently, to continue these measures or a modification of them even after we have no hope of suppressing the fever by their means, for the purpose of lessening the rapidity of spread of the fever which is then extremely desirable, being indeed equivalent to an earlier frost.

The stringency with which they should be then administered depends on many conditions, mainly the lateness of the season. A balance is to be struck between the good to be struck between the good to be gained and the hardship imposed.

And here let me also say that the measures above outlined for use prior to an epidemic are recommended where practicable, i. e., when the authority or influence of the health officer is sufficient to carry them out.* Should the conditions be such, how-

*Obviously it is implied that the state of feeling in the community is to be taken into consideration also. Measures which will be readily agreed to and carried out in good faith in one community will excite violent and unconquerable opposition in another.

The observation of the writer is that in small towns at least Americans of English descent will willingly bear any reasonable amount of inconvenience and some hardship if convinced that this is necessary to avert a greater calamity from the rest of the community—whether of their own town or neighboring towns and if convinced of the reasonableness of the measures to be taken will assist in carrying them out. The case of Jesup, Ga., which closely guarded itself well illustrates this, as does the "house quarantine" in Franklin, Perkinston, and several towns in North Mississippi. It is paralleled by the history of not a few English towns with the plague. The sense of duty to the community seems to be strong.

ever, that the attempted agreement of these restrictions, leads to the successful concealment of cases, they must be modified, *as successful concealment of cases takes away all chance of suppressing fever.*

Our reliance is then placed preventing the infection of his environment by the patient and preventing ingress. Above all the first is important and is to be depended on. The presence of the sanitary inspector and of the trained nurse necessary to carry out are such boons to the patient that we may be sure that no cases will be concealed on account of these measures, if they exhibit reasonable tact.

Indeed the aim must be in all cases to make the household with the yellow fever *a privileged one*—so that it will be to its interest if there be a case among them to have it officially known.

To this end physicians and medicines, delicacies for the patient, and even subsistence for his family, free—are wise sanitary measures as well as charities.

Remember, if cases are concealed, to any considerable extent our chance of suppressing the fever is lost.

WHEN THE FEVER CANNOT BE SUPPRESSED.

The townspeople are always loath to recognize that this condition exists, but when we find cases arising of which we cannot trace the source of infection; when we are unable to efficiently carry out the measures here outlined, or when cases are being successfully concealed, we may know that the fever will not be suppressed until it has run its course or cold weather supervenes.

An infected town is a source of danger to its neighbors no matter what means of quarantine are taken. This is because a certain amount of illicit communication from the town to clean territory will be kept up no matter what rules and regulation are made. The danger is almost exclusively due to those who leave the town for infectible territory. It is in proportion to the number who thus leave directly and to the proportion of infection in the town, hence to their product. Thus one hundred persons leaving when there is one per cent of the town infected conveys the same risk as ten people if ten per cent of the town be infected.

It is our aim then to reduce the number who leave directly

for infectible territory to a minimum (and if possible have none to leave). But to take such risk of leaving as must be taken rather in the beginning of the fever—when there is little infection—than later when there is much more. We first take measures to prevent these people leaving directly without sanitary supervision, i. e., establish quarantine, and, second, arrange for their leaving under such conditions as will not convey infection to clean territory.

This allowing some means of egress from the infected town should go hand in hand with the prohibition of unsafe egress, not only on the ground of humanity to the townsfolk but because a legitimate means of egress being provided, the number of attempts to pass the lines in other ways—a certain proportion of such will succeed—is enormously lessened, *and the providing of a legitimate means of egress if safe is an added safeguard and an important one against the infection of clean territory.*

It is scarcely necessary to cite instances of this; many can be given, it is self evident certainly to all who have had experience of epidemics and seen the imperfection of the best devised prohibitive measures. On the same principle this means of egress should not be made more difficult than is necessary for safety. We wish to encourage its use. To have it rather than an "under ground railroad" selected by those who would leave.

Depopulation then, which has long been recommended as a valuable means of lessening the horrors of an epidemic in the interest of the infected town, is not less valuable as a protective measure to the surrounding infectable territory.

Stress should be paid on early depopulation. There is then not much infection in town and not only are people who leave escaping risk to themselves by leaving early and lessening the rapidity of the spread of the disease in the town, but the chance of infection of outside places from any mishap which may occur is less than if it should happen later.

All who have been certainly not exposed to infection, which we would be able to say of few later, should go without let or hindrance.

The others may go directly to points incapable of receiving the infection of yellow fever—generally northern points—high altitudes—to remain there indefinitely or for a time to cover their incubation. (2) To points capable of receiving such infection through a camp of detention.

By a "camp of detention" is meant any place at which these persons stay unexposed to any infection a sufficient time to cover their period of incubation. No infected article going within.

PEOPLE LEAVING FOR NON-INFECTABLE TERRITORY—POINTS NORTH.

(1) How to get these people through infectable territory to their destination without infecting it is a problem of "Traffic" and will be there considered. Before these people are allowed to go North, we must be assured that they will remain there to cover the period of incubation of yellow fever (say 10 days) or indefinitely, *i. e.*, after frost.

Disinfection of baggage is not necessary for the latter. If, however, they will return after a time to points South their baggage must be disinfected on departure. Indeed if there be any reasonable doubt of their not returning, the burden of proof being on them, disinfection of baggage must be done.

The methods by which the train inspector, on which this work falls, assures himself (1) that a passenger intends and will stay North indefinitely, and (2) that he will stay 10 days and not double back, must be worked out for each particular epidemic, and to a certain extent to each particular road and case. A good man will err by over suspicion and hard rulings.

A person leaving New Orleans in '97 took an affidavit—the stub of which was preserved by the train inspector—that he "would not return to any place quarantined against New Orleans" or that he "would not return to quarantining place for ten days." In the latter case his baggage was disinfected and a certificate of disinfection given him giving the date of his departure from New Orleans and of course the same date of disinfection and the number and kind of pieces disinfected. A label of thin paper was then pasted on each piece of baggage. The certificate of date of leaving New Orleans had a personal description and the baggage label was made of thin paper, so it could not well be detached and used over again. It had the name and date on it and was signed.

It seems best to disinfect all baggage going to remain at points like Atlanta, Charlotte, Nashville, etc., which are great distributing points for railroad travel South, and the only baggage even sent to any such places undisinfecting in '97 was that

of some school girls going to Nashville to a seminary the latter part of October. Indeed Atlanta required this to save herself from quarantine by the coast cities.

There seems no reason why baggage going North through these places should be disinfected, any more than Havana baggage going by the Ward line to the same points. Indeed, there is good sanitary reasons for not doing so. Every obstruction, however slight, put in the way of people leaving an infected town to some extent prevents their leaving and to a disproportionate extent induces them to put off leaving if they do leave. We want them to leave early. Again, as before said, no quarantine is perfect, and in proportion as a safe and legitimate way of exit is obstructed, the illegitimate ways are sought, which is, especially if sought after the town is well infected, dangerous in the extreme to the territory we seek to protect.

Unless we have been in an epidemic on the inside we fail to realize what slight obstructions prevent people leaving an infected town by the ways provided and induce them for the purpose of avoiding moderate inconvenience to take sanitary risks for others which are simply appalling. The rule which should obtain then would be "to require everything which is necessary for safety and nothing which is not necessary, throwing of course the doubt in favor of stringency.

Arrangements should be made with sanitary inspectors at places to which most of these people go to return South again—Atlanta, Nashville, St. Louis, etc., so that they can keep some supervision of them and see that they do not leave for the South until their ten days is past. It would not be difficult to arrange for a pretty fair supervision. It will require to be supplemented by a train inspection South from some of these places. This latter has always been put on.

(2) Persons leaving for infectible territory through a detention camp. The method of conducting a detention camp in detail will not be described. They require much pains and care in their management. I would again call attention to the sanitary protection they afford to the quarantining places as well as advantage to the infected town by letting its people escape. By providing a safe and allowed means by which people who can not go North can leave the infected town, the effort to evade quarantine restrictions is lessened and the seepage, so to speak, through the cordon is minimized. It is extremely difficult to

prevent people evading quarantine who have friends willing to receive them outside and these are the very people who will go through a camp.

For the same reasons as given for not disinfecting through baggage the camp should be made as pleasant as possible and impose no restrictions which are not necessary to prevent the conveyance of infection. The writer holds that it should be known that it will not be held open indefinitely, but be closed after a limited time, so that those intending to avail themselves of it should not unduly put off coming to it. The earlier the people come to camp the less fever will develop among them and while the development of fever at a camp is to be expected, yet it is to be averted as much as possible. It is surprising how little does develop.

WORK IN THE TOWN.

A modification of the measures of disinfection and isolation heretofore outlined may be of use in lessening the rapidity of spread of the fever even when we no longer hope to suppress it and I quote from the latter part of a paper read by title at the Mobile conference on "House Quarantine."

House quarantine during an epidemic: Here it seems to me no elaborate or specially restrictive measures are advisable. Certainly in large towns, and with the epidemic well under way, none are practicable. To attempt too much is to fail, and do less than if less were attempted.

The aim should be (1) to prevent infection of sick premises, and to keep the other inmates from developing fever from such infection as we fail to prevent.

(2) To prevent unnecessary ingress of people in the sick room or premises.

(3) To prevent conveyance of infection from sick premises to outsiders.

(4) To destroy, as far as possible, the focus (presumably) thus established.

Of these the 1st, 2d and the 4th are now the most important.

(1) The removal of unnecessary fabrics from the sick room, cleanliness, aeration and destruction or disinfection of the discharges are about all that can be done to prevent infection of premises. The isolation of the sick-room should be advised and the advantage of sleeping in the upper story remembered.

(2) The means which will prevent ingress varies with the respect for the law, and the good sense of the community. In some places as at Montgomery, Ala., an official prohibition and placarding is sufficient, and when this is not it is doubted if the measures which would be are advisable. In general simply designating the houses and prohibiting entrance is all that to me seems advisable.

(3) Perfection here would be change of clothing, disinfection of hair, etc., on the part of those leaving the house. Free egress would then be harmless. This cannot in general be enforced, but the change of clothing should be recommended and ordered and will be followed to a considerable extent, and to that extent do good. There is less risk in even free unconditional egress than is generally believed.

(4) The premises should be disinfected with as much thoroughness as will not lead to such obstructive measures—concealment of cases—as would defeat our ends. Burning the certainly infected heavy bedding (soiled mattresses, etc.) and replacing it by new articles is not only good *per se*, but tends to make disinfection popular and hence more general and efficient.

It was found last year that the disinfection of the person required in some towns, of all in the house, was more objected to than anything else, and save for the patient I would not require this and would be satisfied with soap and water for him.

If an epidemic begins early in the season it may be a question whether even the method here outlined, which works little inconvenience and no hardship, is worth attempting. An epidemic of yellow fever well scattered in a town will be apt to go through it.

The propositions presented for adoption in the above quoted paper are also reproduced here.

FOR ADOPTION.

(1) House quarantine may be an efficient means of suppressing the spread of yellow fever in a city.

(2) It may also be an efficient means of retarding its spread, if used for the first purpose, there being but few cases of yellow fever in the city.

(a) The non-immune inmates of the patient's house should, if they remain in that city, be moved from that house imme-

diately and kept under observation in an isolated place, free from infection.

(b) The patient if not in a suitable place and it be safe to move him should be moved to one and the premises disinfected.

(c) The premises the patient occupies should be under guard prohibiting ingress and egress of persons, save as absolutely necessary and under sanitary supervision.

(d) Every possible precaution must be taken to prevent infection of his environment by the patient.

(e) Guards must be under sanitary surveillance.

(f) The premises of the patient should be thoroughly disinfected on death or recovery of the patient.

(g) That if the conditions be such that successful concealment of cases be caused by the measures adopted they must be so modified as to avoid this and such restrictions removed and privileges added as may be required.

If used for the second purpose, during an epidemic.

(a) Such precautions as are not too onerous should still be taken to prevent infection of premises of patient and inmates of his home.

(b) Ingress into the infected premises should be discouraged and unnecessary ingress forbidden.

(c) Egress from the infected premises should be freely allowed with such precautions, as change of clothing, etc., as can be enforced.

(d) The premises should be disinfected on death or recovery of the patient.

(e) These measures are advisable in proportion to the lateness of the season.

DISINFECTION.

It seems better to put these few points on disinfection of premises by themselves. They really belong on page 12. (Premises) but to insert them there would, I think, break the continuity of the sketch. It is not proposed to give a description of the process, only to call attention to a few points not always noted. First—

(a) The owner must be insured against any loss from disinfection. We must do no injury or pay for what we do. If this be not done it may lead to concealment of cases of fever or

else to concealment of fabrics especially valued which thus escape disinfection.

(b) Unless the disinfectant be experienced it is well to do as much burning,* wetting and soaking in antiseptic solutions as possible, using gaseous disinfectants as adjuvants.

(c) For gaseous disinfection the house must be closed or must be made so. For thick fabrics—cotton quilts, mattresses, pillows, beds, etc., gaseous disinfection cannot be depended on, if more than their surfaces be infected. Sulphur-dioxide, however, possesses much greater penetrating power than formaldehyde.

For the disinfection of these articles steam is required and indeed it is advisable to use this agent for all fabrics where attainable. Boiling of course is equally (absolutely) efficient, as in soaking in an efficient germicidal solution. The writer would state that his observation leads him to have full faith in the use of sulphur-dioxide, if properly used; also it has been his experience that this agent very rarely is properly used outside maritime quarantine stations. He has full faith in the efficiency of the aeration of fabrics.

Prolonged exposure to sun and air, reasonably dry air, will disinfect any ordinary fabric from yellow fever as completely as burning, and if the choice be between gaseous disinfection as usually applied and aeration, he would, by all odds, prefer the aeration. Of course the location of the premises is frequently such that aeration of infected fabrics is not possible. The house should be kept open, well ventilated and dry after disinfection.

(d) The premises outside the houses must be made clear of trash, chips, leaves, pieces of board, etc. (rotting wood being believed to be an especially bad nidus of infection) The mere wetting of these things as they lay with bichloride solution is not thorough disinfection, the underside seldom being reached by the solution.

It is an injury to wet the leaves of living plants with bichloride of mercury. It kills the leaves, etc., and after a rain

*Not a few cases of development of fever has been ascribed to burning infected articles. Whether the current of air caused by the fire carries the agent of infection through the heat, etc., may be a question. If the surface of the pile be pretty thoroughly wetted with coal oil and this fired first it would seem impossible that infection would be thus spread. The writer has no personal cognizance of any spread from burning infected articles.

has washed the bichloride off, these dead leaves are a good nidus (culture nidus) for any infection, as on the under side of a leaf, not destroyed. It is not reasonable to believe that the living leaf would serve such an end.

(c) The thorough wetting of the cleaned ground, ditches, etc., with bichloride solution or covering it with chloride of lime is doubtless efficient but unquestionably the disinfection of the outside premises by fire is the method of election.

This is best done by the Barber Asphalt Furnace, as used by Farrar in New Orleans in '97, which is fairly manageable. If this machine is not available, ordinary fires built and continued for a considerable time as done by the writer at Conquests Camp and at Brunswick, Ga., in '93, is absolutely efficient but far less manageable and more apt to set neighboring structures afire.

The introduction of the Asphalt Furnace by Farrar is a distinct and valuable addition to our disinfecting armamentarium and indeed is equivalent to giving a new and most efficient method, for it renders quite generally applicable a method which was but rarely used by the crude means used in '93.

By watching the houses to the leeward of the disinfected house one can sometimes form a fairly good idea of the efficiency of the work done about the premises even if the non-immunes do not return to those disinfected.

(f) Disinfection when we hope to suppress the fever must be thorough. Everything must yield to this. The evil we seek to avert is too serious to weigh expenses, or convenience, or hardship against it.

(g) When we no longer hope to suppress the fever and use this measure simply to limit or lessen the rapidity of its spread the extent to which it should be carried out depends, as so many other quarantine measures, on the balance between the good to be attained and the cost including hardship and inconvenience. In general the fabrics of the sick room and nurse's rooms, and these rooms themselves, should at least be disinfected. This if done by some method not injurious and little annoying—formaldehyde and steam and scrubbing the floor with bichloride solution—will not make the second factor large and will, I believe, in a considerable number of instances prevent the further infection of the household. No one who has examined the lists of the sick by houses, as in post-epidemic disinfection, can fail to be impressed with the fact that yellow fever is to a considerable extent a house disease even during an epidemic.

Editorial.

H. M. FOLKES, M. D., BILOXI, MISSISSIPPI,

Editor and Business Manager.

CGLLABOLATORS.—H. A. Gault, M. D., W. A. Carnes, M. D., H. A. Minor, M. D., H. H. Haralson, M. D., H. N. Street, M. D., C. L. Horton, M. D., Wm. Krauss, M. D.

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The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

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OUR esteemed friend, the Polyclinic of New York, is in error in charging the Gulf Coast with falsification of facts in regard to yellow fever last year. The trouble was that it was not recognized as yellow fever at the beginning, and when finally it was investigated so much doubt was evinced at the first examination as to lead to confusion all around. The best

citizens all along the whole coast nearly all said it was yellow fever and lent their every effort to aiding the health officials. A few stiff-necked members of our own profession have held out that it was not and are largely responsible for the unnecessary quarantine this year, as the Louisiana board feared that these same men might have a case of fever and would not report it as such. So unfortunately the good citizens have to suffer for the laches of others.

* * *

THE attention of the able, but this time misinformed, editor of the *Sanitarian* is called to the fact that the Mississippi State Board of Health had charge of McHenry, Miss., during the recent outbreak of yellow fever at that point; that the fever was reported by their representatives, Drs. Haralson and Folkes, who out of courtesy waited, from 8:15 a. m. until 4:23 p. m., the arrival of a representative of the Marine Hospital Service, and the further fact that the very thing which enabled us to stamp the fever out, house quarantine, was insisted upon by Folkes, who, after being twice overruled, had the satisfaction of seeing his wishes carried out. The M. H. S. in charge of the disinfection of the town did the best work of the kind ever done and are deserving of all praise therefor. It affords me the extremest of pleasure to say that the service and the State Board have worked most harmoniously together during this little affair.

* * *

Surgeon H. R. Carter of the Marine Hospital Services, one of the ablest sanitarians this country possesses, has been ordered to Santiago to try and devise measures of relief for Shafter's stricken army and for the general improvement of sanitation in the city. If earthly means can accomplish this Dr. Carter will succeed, for he is built that way.

Since the above was written, Surgeon Carter has had his hands full with the Franklin affair and has not been able to get to Cuba.

* * *

Some facts and figures for thinkers compiled from official records in offices of Auditor and Treasurer of the State of Mississippi.

Financial record of Mississippi State Board of Health for

past ten years, showing amount of appropriation for each year and amounts expended, and covered back into State treasury, not having been used by board.

Year	Appropriation	Expended	Covered Back
1888	\$20,000 00	\$16,495 78	\$ 3,504 22
1889	20,000 00	5,547 86	14,452 14
1890	20,000 00	5,423 42	14,576 58
1891	20,000 00	5,525 70	14,474 30
1892	25,000 00	5,372 56	19,127 44
1893	25,000 00	3,916 87	21,081 13
1894	20,000 00	4,644 63	15,355 37
1895	20,000 00	5,198 45	14,801 55
1896	20,000 00	8,798 92	11,201 08
1897	20,000 00	20,000 00	00,000 00

Owing to outbreak of yellow fever in '97 the legislature of '98 made an additional appropriation of something over \$20,000 to make up deficit.

It is needless to comment on these figures. They speak for themselves.

Public Health.

On the question of the pay of experts as witnesses in courts the decisions of the courts of last resort have not been uniform. The consensus of opinion, however, is that an expert cannot be compelled to give his opinion unless he is compensated for it, and a refusal to testify without compensation is not contempt, although as to matters of fact coming within his own knowledge he may be compelled upon the same terms as other witnesses. *See* *Buchman vs. the State*, 59 Ind. pg. 1, 26 Am. Rept. pg. 75. *United States vs. Howe*, 12 Cen. L. J. 193. Wharton, Greenleaf, Phillips, Starkie, in their several works on evidence treat of this subject in an exhaustive manner. Lawson on "Expert and Opinion Evidence" will be found a thorough treatise on the subject of Experts.

Abstracts and Extracts.

Many of us are too prone to limit the significance of germs to their actual size, thus relegating them to the old adage "Out

of sight, out of mind." Let us suppose, then, instead of dealing with such micro-organisms, their natural size were that of peas, how different we would regard them and with what intense interest we would note their relation to pathological phenomena. They would be sought for before a single symptom, and, when found, that disease would probably be named according to the specific germ associated with it. Our "Theories and Practice of Medicine," instead of dealing with the clinical course of pathological conditions under the separate captions of its Definition, Causes, Pathological Anatomy, Symptoms, Diagnosis, Prognosis and Treatment, would only consist of two divisions; the first dealing with the "specific germ," the second with a method by which such germ could be destroyed without destroying the life of the patient.—*Thorington on "The Importance of a Microscope in the Practice of Medicine"*

1. Cancer may occur at any time after beginning of the menstrual life of the woman.

2. The early symptoms are oftentimes obscure.

3. The least irregularity during the climacteric should arouse our suspicions.

4. Suspicious cases should be subjected to microscopic examinations.

5. Early operation is the only hope for cure.

6. Extirpation after the disease is very evident, after appearance of cachexia, is harmful rather than beneficial. In these cases our efforts should be directed towards making the patient more comfortable.

7. Finally it is our duty to teach and insist upon women consulting the physician for any irregularities in the menstrual flow.—*Frank in Va. Medical Semi-Monthly.*

CLINICAL FORMS OF DIPHTHERIA.—

1. So-called Follicular Tonsillitis.
2. Primary Diphtheria of tonsils and pharynx.
3. Primary Naso-pharyngeal Diphtheria.
4. Primary Nasal Diphtheria; also called Membranous Rhinitis or Diphtheria Lanata.
5. Primary Laryngeal Diphtheria (Membranous Croup).
6. Diphtheria without membranes (simulating simple Angina).

7. Secondary Diphtheria, following Measles, Scarlet Fever, Pertussis, etc.—*Caille, excerpted from New York Post Graduate by Charlotte Medical Journal.*

RATIONAL TRAINING OF CHILDREN.—

1. The esthesiometer is the proper instrument for the measurement of fat.

2. Tentative experiments with American boys prove a superior normal strength of their mental vigor under favorable conditions of atmosphere.

3. Unfavorable conditions of atmosphere show an unusually large percentage of abnormal fatigue of the nervous system.

4. This condition is due to the utter lack of systematic open-air exercise.

5. Such exercises for children are a prime necessity because the foundations of a healthy and useful life are laid between the 7th and 15th years, but never afterward.

6. Training of all the functions of the physical organism should precede instruction, because it will develop the necessary mental strength.

7. Children should be classified according to their individual characteristics, and stress should be laid upon the development of their weakest organs, in such way, however, as to leave plenty of room for individualization.

8. Such exercises should take place every afternoon and should be continued until the limit of normal fatigue is reached.

9. The exercises should be grouped into muscular, cutaneous and respiratory.

10. All these exercises should be essentially exercises of the nervous system, to lead to a proper development of character.—*Prof. Richard C. Schiedt in the Sanitarian.*

HYSTERIA AND BRAIN TUMORS.—

1. Optic neuritis is present in about 90 per cent of all cases of brain tumor.

2. It is more often present in cerebral than in cerebellar cases.

3. The location of the tumor exerts little influence over the appearance of the papillitis.

4. The size and nature of the tumor exerts but little influence over the production of the papillitis.

5. Tumors of slow growth are less inclined to be accompanied with optic neuritis than those of rapid growth.

6. It is probable that unilateral choked discs is indicative of disease in the hemisphere corresponding to the eye involved.

7. It is doubtful whether increased intracranial pressure is solely and alone responsible for an optic neuritis in cases of brain tumor.

8. Optic neuritis is never present in functional nervous disease.

9. Where the diagnosis between organic brain disease (as tumor) and functional nervous disease (as hysteria) is held in abeyance, the presence or absence of optic neuritis in the great majority of cases will clear up the doubt. *Kraus, Buffalo Medical Journal.*

Medical News and Miscellany.

Dr. O. W. Stone has gone to Cuba to lend his valuable services to Uncle Sam.

Drs. Wasdin, Geddings and White have been advanced to the grade of surgeon in the Marine Hospital Service.

Dr. Sweringen, State health officer of Texas, has lately passed to the great beyond. The State has sustained a great loss by the death of this able, conscientious and pains-taking official. His mantle falls upon the shoulders of Dr. W. F. Blount.

One of the medical profession seems in a fair way to earn renown by the present, or rather past, war and that is Brigadier General Wood, the former commander of the Rough Riders. He has been made governor of Santiago and the wisdom of his selection is already apparent in the diminution of fever cases in the city, and the immediate air of tranquility throughout the populace. The doctor shines either as physician, diplomat or soldier and is an honor to the profession.

Our Southern peace and tranquility has again been broken in upon by the announcement of fever at Franklin, La. A man died there and on postmortem, the diagnosis of yellow fever was confirmed. Texas and Louisiana promptly quarantined the whole parish, pending investigation. The investigation had been completed and quarantine ordered raised, when another case appeared in Franklin. The embargo was at once reapplied and all precaution taken. So far there has been no further case.

Since the above was written two more cases have developed.

A suspicious case has been reported at Galveston, and as we go to press investigation is going on. The case was regarded as the genuine article by Dr. Eager of the Marine Hospital Service at that point, but is not so considered by the health officer of Galveston. Houston and the States of Mississippi and Louisiana very quickly took the precaution of quarantining the city of Galveston. As the case is about three miles from the city, we suppose Dr. Fisher will appreciate the intrinsic merits of quarantining clean territory. New Orleans is establishing quite a reputation for herself as being a city most fearful of yellow fever, and very properly being anxious to keep it out. The Texas city had her turn in '97.

Since the above was written Galveston has developed three more cases.

Yellow fever has within the past few days been reported at Key West. There were said to be nine cases, all of whom were at the Marine hospital. From a report of the symptoms of some of the cases it looks as though there might be doubt as to diagnosis among the gentlemen who have seen the cases. However, we will have nothing to say about that, leaving it entirely to the men on the ground. There has been too much of a tendency to question diagnosis by all kinds of people who have not seen the cases at and whose opinion therefore is as valueless as such an opinion always is. Whatever the cases may be Dr. Porter has taken pains to protect the people by at once putting on quarantine.

Drs. Sanders of Alabama and Haralson of Mississippi have inspected Tampa and report it free from fever.

Surgeon Murray has been ordered to inspect Key West.

NEW ORLEANS POLYCLINIC.—Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, particularly laboratory work. *The twelfth annual session opens November 24th, 1898.* For further information address New Orleans Polyclinic, P. O. Box 797, New Orleans, La. s to ap

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H. DRENNAN, M. D.

Verdery, S. C.

THE BEST AND THE CHEAPEST.—In prescribing either medicine or nutriment, a physician must often consider the question of what is the most economical as well as what is best for his patient. And it is only occasionally that he is made happy by the knowledge that the cheapest is the best. He always knows that "the best is the cheapest," but this helps him very little if economy must be thought of.

John Carle & Sons point with pride to the fact that their prepared food, Imperial Granum, is the most economical as well as the best food on the market, and in proof of this, they ask physicians to carefully note the weight of their handsome "Small" and "Large" size air-tight tins, and also to kindly notice the length of time either one will last, bearing in mind that their sterilized tins form the lightest, as well as the safest retainer that can be used.

DIGESTIVE DISORDERS OF CHILDREN.—The value of listerine in those digestive disorders of childhood, which lead to what is commonly called cholera infantum, can scarcely be overrated. A teaspoonful of listerine administered per oris has been known to dissipate the most alarming symptoms, cutting short the attack and apparently saving life. A good way is to begin something like this: Calomel and chlorate of potash each one grain, to be rubbed well together and to be divided into ten powders, one to be given every five minutes until vomiting ceases and the nature of the stools have been changed; then commence and give teaspoonful doses of listerine every four hours until convalescence.—*Medical Progress.*

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The Journal

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Mississippi State Medical Association.

VOL. II.

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No. 7.

Original Articles.

The Treatment of Osteo-Myelitis With Report of Six Amputations, Five Osteotomies and the Observation of Three Other Cases.*

By M. GOLTSMAN, C. M., M. D., MEMPHIS, TENN.

Co-Editor Memphis Lancet; Formerly House Surgeon Woman's Hospital and Western Hospital, Montreal, Canada; Surgeon Shelby County Poor and Insane Asylum, Etc., Memphis, Tenn.

Before the days of asepsis osteo-myelitis was the "bete noir" of the surgeon's existence. It would follow amputations, compound fractures and other injuries with a regularity and frequency that was almost terrifying. Like the abdominal, the medullary cavity was a field dangerous to invade, and therefore uninviting to the surgeon. Today, since we are better able to understand the etiology of disease and especially of osteo-myelitis, and since we apply proper prophylaxis to surgical and non-surgical conditions, osteo-myelitis is becoming less and less seen, more readily recognized, and when present, treated with a radicalness that is almost astonishing. To chisel away a furrow of half or three quarters of an inch for nearly the entire length of the tibia or fibula, enter the medullary cavity and thoroughly clean it out, is today a very frequent operation and has only been made possible by proper attention to the details of asepsis

*Read before the Mississippi State Medical Association, April, 1898.

and antisepsis. For the sake of convenience osteo-myelitis may well be divided into three stages. 1st. The acute stage, which may be suppurative or nonsuppurative, according as there are present or absent pyogenic micro-organisms. 2nd. The sub-acute or formative stage. 3rd. The chronic or exfoliative stage. It is not my purpose to consider the diathetic bone affections any more than to say that the syphilitic variety needs active and intelligent anti-syphilitic medication with the addition of operation for removal of sequestra or abscesses when these conditions present, the tuberculous tonics, good hygienic surroundings and radical operations in obstinate cases.

As an example of the first stage let me cite you the case of A. M. age 26, negress, prostitute, contracted syphilis six years ago. About eight months ago a painful swelling about the lower part of the left tibia broke down, leaving a very large ulcerated surface. The pain now became much better until about a week ago when she arrived at the Shelby County Poor House in a semi-delirious state, with great pain over the entire leg, which was held stiff and rigid, and several openings about the knee joint. She was highly septic, had several chills, pulse 140, weak and thready, temperature 104° F., tongue dry and coated, sores about the mouth, in short she was in a low typhoid state. The history of syphilis, an open septic wound, the suppurating sinuses and the general condition of the patient made the diagnosis comparatively easy, and in spite of her condition, which was deplorable, and at her own request, she was prepared for operation, which was done the following day. Amputation by transfixion flaps above the knee to save time, revealed the medullary cavity of the whole femur a veritable pus sack, with the bones of the leg and the knee joint thoroughly disorganized. A long, sharp uterine curette was inserted and the canal thoroughly cleansed out, irrigated with bichloride and peroxide and packed with iodoform gauze. The operation did not last more than twenty-five minutes, and in spite of active stimulation and saline hypodermoclysis, she died the following day. This was undoubtedly a case of acute steeptococcus infection implicating the myeloid tissue through the general circulation. Amputation with disinfection of the medullary cavity in the first days of her illness might possibly have saved her life.

As an example of the subacute or formative stage, let me cite you the case of A. M., negro, age about 60, denies syph-

ilis, leg ulcerated sixteen years. Several weeks before coming to the poor house was very sick with chills and fever which made him very weak. There was no regularity about the chills and as near as I could ascertain they were unaffected by quinine. This spell of sickness lasted about two months and he came to the poor house to be "built up."

An X-Ray examination revealed almost complete decay of both tibia and fibula. Operation was decided upon and when I arrived a few days later prepared to operate, the bird had flown. With the aid of crutches he walked twenty miles to his home. A few weeks later the dull aching pain in his limb brought him back to the poor house ready to submit to operation. After trying to save his knee joint, which was now impossible, on account of disorganization, I amputated well above it, utilizing only antero-posterior skin flaps. The marrow in this case was entirely different from that in the first. It was solid, of firm, liver-like consistence and color, and surrounded by bone that was somewhat more yielding than normal. For example, it would not cut with a snap under bone forceps, but simply caved in from the pressure; it was also redder than normal, which all goes to show that it was undergoing inflammation. The carnified medullated tissue was all scraped out, disinfected with peroxide and bichloride solution 1.1000, and packed with iodoform gauze. He made an uninterrupted recovery. The myeloid tissue in this case was slowly reaching the stage of granulation tissue formation to be finally cast off as a sequestrum. The operation cut short this process, relieving him of its pain and its dangers as well as of a foot and a leg that looked more like a Madura foot than anything else (vide photo. No. 1).

As an example of the third or exfoliative stage, let me cite the following case: A. M., negress, 18 years of age, plump, buxom, prostitute, giving very indefinite history. About two years ago had a long spell of chills and fever, when she was "out of her head for a long time and her folks thought she was going to die". She got completely well of this but began to have pain six months ago in her right leg, which showed a somewhat fusiform swelling in the region of the upper tibial epiphysis, which was extremely sensitive to touch; locomotion was impossible without the aid of a crutch. A diagnosis of dead bone was made and she readily consented to operation on promise that her leg would not be taken off. An incision down to the bone was made

over the most tender point, which had previously been determined, the periosteum, which was perfectly healthy and most easily detached, was carefully separated, the bone laid open with a carpenter's mallet and chisel, and a sequestrum fully four inches in length was removed piecemeal, as it had not yet separated. The medullary cavity was most thoroughly cleansed with peroxide, irrigated with bichloride, and packed with iodoform gauze. She made an uninterrupted recovery and is now serving a sentence on the rockpile. The bone or involucrum in this case presented an appearance entirely at variance with that seen in the other two cases. It would chip off like stone, the pieces flying a considerable distance and looked like polished ivory, being much harder, denser and thicker than normal bone, while it embraced firmly the sequestrum which occupied the central cavity. I might say here that these three operations were done one after the other on the same day. Dr. Joseph H. Venn diagnosed the third case and performed the operation with my assistance, he assisting me in the other two. Drs. Krauss and Pincus were also present during the first two operations and gave valuable assistance for which I now take pleasure in thanking them.

Eliminating tubercular and syphilitic bone affections, osteomyelitis is the most frequent of all inflammatory bone diseases, there being practically no such disease as primary periostitis or osteitis.

Six amputations, five osteotomies and the observation of three other cases in private practice comprise my experience with this disease. The photos here presented will give you an idea of some of the cases. Three amputations above the knee were done for the relief of acute suppurative osteomyelitis with one death. Three were done for chronic sepsis the result of chronic ulceration of the leg and subacute osteomyelitis, the marrow having a carnified appearance. In all six cases the medullary canal was thoroughly scraped with a long, sharp curette, cleansed with hydrogen peroxide and irrigated with bi-chloride solution 1-1000. In two a long tube was passed through the empty canal to the head of the bone and the end allowed to protrude from an opening cut through the skin opposite the canal for the purpose of drainage and future irrigation. I discovered later that Wyeth recommends the same course of treatment and it is undoubtedly the best, having many advantages over gauze packing. Of the three amputations for subacute osteomyelitis,

one was done in a very old woman with atheromatous vessels. The internal saphenous and femoral veins were much enlarged and thrombosed, and three weeks after operation, after being able to hobble about on her crutches, she was taken suddenly ill one night, gasped for breath several times and died before assistance could reach her. There was no autopsy, but I believe that embolism of the pulmonary arteries was the cause of death in this case. Thus really only making one death in the series of six amputations. Transfixion was done twice, circular amputation once and antero-posterior skin flaps with circular division of the muscles three times. Two were males and four females. Two were over 60 years of age, three were less than 20 and one was 26.

The five osteotomies, or more properly necrotomies, which were radical to a degree, but for which I find ample authority (3, 6, 7, 8, 14, 17), are briefly as follows: Four were females, one male. The youngest was 15 the oldest 20 years of age. The tibia was involved in four cases the fibula in one.

Two of the operations were done for the relief of the acute suppurative form of the disease, in one before perforation had taken place; both recovered very promptly. Two were done for the extraction of sequestra, one of which was almost complete, four inches long, and so firm that it had to be chiseled away piecemeal; from the other the sequestrum which I now show you was removed from an opening, on the inner side of the tibia, at its upper epiphysis, which I enlarged in a downward direction until I came upon healthy marrow.

The fifth and last case presented a large chronic ulcer on the outer side of the right leg almost encircling it, and extending from the ankle to about five inches above it. The fibula was found to be the seat of an extensive osteo-sclerosis, looking more like an enlarged femur than a fibula. The ulcer was thoroughly scraped with a sharp curette, the skin freed from the underlying tissues and an incision about seven inches long extending through the area of bony overgrowth and through the much thickened periosteum was made. After the periosteum had been cut free from the underlying bone almost the entire fibula was removed with the mallet and chisel, the cavity irrigated and the wound dressed. She made an excellent recovery.

I make especial mention of the treatment of these cases to show what results can accrue from early diagnosis and radical

operation, and particularly to emphasize the fact that temporizing with medicinal measures is absolutely useless. Temporizing does much harm and no good.

Early diagnosis and early operation are the indications and they should be met promptly and boldly. Little or no blood is lost in these operations by the use of an Esmarch bandage, which should be applied from the toes up after the parts have been thoroughly prepared for operation in the usual way. The majority of my cases were allowed to granulate from the bottom by the open method with very good results, but it is not to be recommended. Primary union can readily be obtained by careful attention to the details of asepsis and antisepsis, chiselling and scraping away all infected tissue to the extent of leaving a mere shell of bone, as was done in several of my cases, thoroughly disinfecting the cavity by means of peroxide and bi-chloride solution 1 to 1000, and allowing it to fill up with blood, or packing it with Senn's decalcified bone chips, over which the periosteum and soft tissues are united and perfect union obtained under one or two dressings. These are ideal methods, but can only be carried out where you are absolutely certain of asepsis; when you have the slightest doubt in this respect allow the wound to heal by granulation, which will take place in about seven weeks.

Another method is that of Neuber, who makes sliding skin flaps which he tucks into the cavity of the bone and retains in situ by means of sterilized nails or by passing a suture through the edges of skin and carrying it through the bone and soft tissues to emerge and be tied over a piece of rubber tubing on the opposite side of the limb. The simplest, however, are the open, blood clot and decalcified bone chip methods. The point of operation is selected by eliciting the point of greatest tenderness, which, of course, is done before the patient is anæsthetized; should this prove to be in a situation surrounded by a thick muscular covering or important structure, as a large nerve, artery or nutrient vessel, the disease may be reached through another plane at a point opposite the place of greatest tenderness in the bone. In cutting through the soft tissue on the back of the femur at the lower epiphysis, Gerster recommends ligating the vessels as they are cut, but in suppurative cases I am somewhat inclined to encourage bleeding, as it relieves the system of just so much toxic material, and what is left can be diluted with

a vital physiological fluid in the shape of normal salt solution which, in conjunction with stimulants, are to be recommended as prophylactic measures of great importance from the start, operation or no operation. After reaching the periosteum, which should be carefully incised and held aside, together with the soft tissues by retractors, the contents of the medullary canal can be determined by exploring with a hand drill. When once the character of the medullary contents are found to be purulent a trough should be cut in the bone extending above and below the drilled opening until healthy myeloid tissue is encountered. The pus must be thoroughly washed out, the granulations all scraped away with vigor and the cavity treated either by the open method or by primary suture.

The same indications apply in late operations, that is, in operations where sequestra are forming or have already formed. When a sequestrum is discharging through a sinus this should be enlarged, the dead bone removed, the granulations thoroughly scraped away, including all softened myeloid tissue and further treated as in the acute or subacute cases. When disease involves the entire shaft it is sometimes well to interrupt the openings made into the bone and when located about an articulation to avoid entering the joint, which can be readily done by merely scraping away all the diseased tissue in the head of the bone leaving nothing but a mere shell. I have done this several times and the cavities quickly fill up.

When a neighboring joint is involved the character of the involvement should be ascertained by aspiration; ordinary catarrhal synovitis will quickly get well after the myelitis has been properly dealt with; purulent arthritis calls for drainage resection or amputation. After necrotomy absolute rest by the application of splints should be procured to prevent pathological fracture, contractures and other deformities. In multiple osteomyelitis the indications are even more decided. They almost invariably die, so stimulate them freely as possible and cut boldly and deeply into the parts affected and clean them out most thoroughly.

Intermediate operations consist in operating upon and thoroughly draining, those cases where the pus has come to the surface and burrowed into, and among, the soft tissues. All separated bone should be removed, abscess cavities thoroughly drained, dressed and splints applied. Tuholski teaches that a

small opening in the bone should be made through which the entire diseased canal can be reached with a sharp curette, thoroughly curetted, cleansed with peroxide, irrigated with water with which the cavity is filled and into which the redhot point of a cautery iron is introduced until the water boils. The hot water is then allowed to remain a few minutes, when it is mopped out and the cavity packed with gauze. It pleases me to call this the blind method. You may remove or infect healthy marrow and still be unable to say whether or no you have removed all the disease. The time taken in bringing the water to boiling point would be better utilized in opening up the bone wide and deep and utilizing sight and touch in the detection of all infected foci. Filling the cavities with amalgamated copper has been recommended and also with plaster of paris.

In summing up these deductions may be formulated:

1st. Eliminating the diathetic bone affections osteo-mylitis is the most frequent inflammatory disease of bone.

2d. Acute primary periostitis and ostitis are practically unknown and occur only as secondary affections to osteo-mylitis.

3d. The negro race, childhood and early manhood, are most prone to the disease.

4th. It is an acute disease, depending upon infection of the myeloid tissue by pus micro-organisms, which may be introduced into the system by small boils or abraded surfaces, or follow in the wake of almost any of the acute infectious diseases.

5th. A "*locus minoris resistentiæ*" is probably always present and a history of some slight trauma is usually elicited.

6th. It is most commonly observed about the femur and tibia in the region of the lower and upper epiphysis respectively.

7th. The diagnosis is always more or less difficult, but this disease should always be thought of in sudden acute conditions with symptoms of rapid and severe sepsis, especially when occurring in the young during or following an infectious disease.

8th. Pain, localized tenderness and loss of function, in conjunction with the sudden onset and typhoidal state, justify the diagnosis of osteo-mylitis.

9th. When once the diagnosis is established the indications, first and last, are the conservation of the patient's vitality and early radical operation.

10th. Pain, tenderness and loss of function in other bones,

occurring in the course of osteo-myelitis, are evidence of extension of the infection.

11th. Multiple osteo-myelitis being nearly always a fatal infection, operation should be done at once, as it offers about the only chance to the patient.

12th. In amputations the medullary canals should be carefully curetted and drainage tubes inserted in preference to gauze.

13th. In performing necrotomy preserve the integrity of the periosteum and avoid important nerves, arteries and nutrient vessels.

14th. Removing a sequestrum is not sufficient; the canal should be completely freed of all infectious material and thoroughly asepticised.

15th. Should synovitis be present always determine the character of the effusion before operative interference. Catarrhal synovitis rapidly disappears after the diseased medullary canal has been properly disinfected. Suppurative arthritis may call for drainage, resection or amputation.

16th. Some loss of blood is to be encouraged, especially in severe septic cases, the loss being easily replaced by injecting normal salt solution which will also dilute the remaining poisons.

17th. Retention apparatus should be resorted to from the first to prevent deformities, dislocations and fractures, and should be continued in necrotomy cases until granulation is complete, when crutches are indicated.

18th. Active stimulation, opiates to relieve pain, nourishing diet, good surroundings and careful attention to the enunctories are essential here as in all other acute diseases.

19th. Temporizing in the presenee of this disease offers nothing, while early and radical operation relieves pain, allows the removal of all infected tissue, prevents extensive necrosis, guards against fatal septicemia, prevents extensive destruction of periosteum, cuts short the attack and expedites recovery.

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On the Value of the Autopsic Findings in Cases That Have Died of Suspected Yellow Fever.

BY P. A. SURGEON EUGENE WASDIN, U. S. M. H. S.

The history of this acute infectious disease establishes clearly the fact that it has been, and continues to be, of absorbing interest to all who have come in contact with it, because of the obscurity which has always enshrouded its etiology, the comparative difficulty in diagnosis and the varying severity of the disease during different epidemics and in different localities. Naturally the question of its diagnosis, upon which depends very frequently the safety of large communities from its ravages, and, per contra, the integrity of commercial relations between a suspected place and other reactive centers, is a most important one. For many years the external appearance of the dead body, and that of the internal organs, has been accounted of great value to the diagnostician; and it is of the comparative value of such appearances to one called upon to make a decision under such conditions that this paper treats.

The yellow fever cadaver has assuredly a most characteristic appearance. All bodies dead of the disease bear a close resem-

blance to each other; indeed, it would not be difficult to make a diagnosis, other facts being favorable thereto, from the cadaver alone. The body is usually quite rigid, this change in the muscles coming on early and persisting. The color is invariably more or less intensely yellow, and is due to a mixed hepatogenous and hematogenous jaundice. The entire skin is tinted, the scalp usually giving a startling contrast with the parted hair; the whites of the eyes are yellow, the change taking place in the conjunctivæ early in the disease, the scleræ becoming tinted later. This yellow tint is always contrasted with the deep purple discolorations from hypostasis which quickly appear in the skin of the dependent portions of the body after, but which frequently appear before, death. It is at the edges of these hypostatic areas that the mixture of biliary and blood jaundice is particularly noticed, as a muddy, thick, grayish-yellow tone. Hypostasis is common in all cadavers, but particularly is it prominent in this disease. It is not confined to the lower portions of the body, as the buttocks, loins and shoulders, but invades the neck, chest, ears and face; the genitals, as a rule, and the finger and toe nails are of a deep purple color. This discoloration occurs quickly and is prominent in an hour post mortem. The pupils are usually dilated; the tongue foul, or, like the gums, bloody; the anterior nares are caked with blood. This is a picture of a typical cadaver, and the appearances may be accentuated or softened, but the characteristic ensemble will be present in all. During my recent stay in the city of Havana, I was called upon by Dr. Curto, of the staff of the military hospital, Alfonso the XIII, to decide the presence of yellow fever in a cadaver three hours post mortem. The body was quite yellow, and there was hypostasis, but it lacked the characteristic appearance, and section showed indubitable evidence of malarial toxemia of long standing.

My experience, from autopsies of cases of malarial fever in the south, teaches that there are externally many points of resemblance in them to the yellow fever cadaver, and at times I feel assured the decision between them would be very difficult or impossible. Dependence must then be placed upon the conditions found in the internal organs. Section shows deep yellow tinting of the superficial tissues and the peritoneum; a dryness of these tissues; a glazed appearance of the intestines, which are dry and sticky to the touch, and a deep-tinted peritoneal fluid'

The organs are of a yellow tint ranging from light to deep saffron. The omentum is deeply congested, the dilated, purple veins contrasting with the general tint. The spleen is usually of normal size and appearance, any deviation suggests preceding or complicating disease. The kidneys are always congested and swollen; the stellate veins of the capsule are prominent; the capsule itself is not influenced by the disease; frequently there are extravasations upon the cortical surface. Incision of the organs shows congestion of the renal veins, yet the general appearance is pale; the cortex is swollen, its markings usually obscured and at the bases of the pyramids of Malpighi there are seen pale yellow fatty areas. These are very generally seen, and in cases of long duration a general fatty appearance is present.

I would attract especial mention to these fatty areas about the base of the pyramids within the cortex, for they can be seen when the kidney otherwise appears free from fatty change. The adrenals are normal. The urinary bladder is usually empty from anuria; its mucosa may present extravasations; in one case only have I known bloody urine from such extravasation. The mesentery is always typically congested, yet I have but rarely seen extravasation in its layers; the congestion is more marked in the reflection upon the duodenum. The liver, long considered the pathognomonic organ, may or may not be normal in size, but any deviation from the normal I consider dependent upon some other cause, for if the histology be considered it will be seen that upon the increased amount of blood in the vessels depends any increase, while the termination of the disease must anticipate noticeable decrease in its size from absorption of the fatty detritus. I have usually found the organ normal in size. The gall bladder is generally empty, owing to the intra-abdominal pressure from vomiting and decreased secretion, but may contain a normal amount of bile. The color of the organ varies from a light buff or "boxwood" to a dark brown, this seeming to depend upon the amount of congestion, the left lobe and upper portions being as a rule lighter in color than the right and more dependent portions, the posterior surface being a dark blue from stasis. At times this fatty appearance is diffuse, and again there may be only plaques of yellow upon the surface or throughout the organ.

A frequent appearance is that of the so-called "nutmeg" liver, the yellow points contrasting with the red lines about

them. Upon section, the liver, if not the subject of preceding disease, presents a normally firm resistance; is of firm consistence; at times friable and dry; of a pale-yellow color and imparts to the blade a greasy stain. The portal vessels are full of dark fluid blood, which quickly changes to carmine on exposure to the air. The venous radicles are distended, the adjacent parenchyma showing fatty change, and this contrast results in the "nutmeg" appearance. The smaller bile ducts are empty. The capsule is normal. The vessels of the stomach walls are congested, also those of the omental reflections. The stomach may contain more or less blood-stained fluid, which, if exposed to the acid secretion for some time, may have the "coffee grounds" appearance. Frequently the content is a thick, glairy, grayish mucus which clings to the mucosa. The mucosa itself is invariably thickened, swollen and presents numerous patches of extravasation and shallow erosions. While the entire membrane may be affected, the changes are more marked on the anterior surface and near the pylorus, the membrane here presenting a deep port wine stain from diffuse extravasation, and often evidence of free hemorrhage.

If many hours have elapsed between demise and autopsy the membrane will be found much softened and with many erosions from post mortem change. The vessels of the duodenum are engorged; the mucosa is swollen, eroded and hemorrhagic; in some instances it contains black, grumous blood from which the stomach was free. The mucosa of the entire canal may present evidences of ante-mortem congestion in the form of minute extravasations. In the female there may be extravasations in the ovaries, or in the mucosa of the tubes and uterus. The vessels are prominent on the surface of the diaphragm. Within the thorax the general yellow tint prevails, there being nothing notable about the lungs save congestion; the pleuræ frequently present ecchymosis; the pericardium also is frequently ecchymotic both visceral and parietal; the heart is usually in diastole, or the left ventricle may be rigidly contracted from change in the muscle, the right being always dilated with dark fluid blood. There is always present a very notable congestion of the vasa vasorum of the great vessels at the base of the heart, these minute vessels forming a delicate tracery over their serosa, and upon the walls of the auricles, with at times minute ecchymosis. I deem this a very constant and characteristic appearance. The heart muscle

does not show fatty changes very often to the unaided eye. The fluids of pericardium and pleuræ are yellow. The changes in the brain and its membranes are those of intense congestion, the fluid of the ventricles being yellow, and there may be extravasations. Such are the findings in a typical yellow fever cadaver.

It is sometimes said that a yellow fever autopsy is a bloodless one, but this expression must have arisen because of the limited scope of many hastily made sections, which consisted in an exposure of the liver and its incision, the extraction of a kidney and the exploration of the stomach *in situ*. In reality, the full influence of the toxin is felt upon the vasomotor system and results in an incomparable congestion of the vessels of the abdomen, and when complete the section presents an appearance quite the reverse. A study of the histopathology of the organs must be limited to the examination of fresh sections from the liver and kidneys, for in these the fatty changes are best seen; the liver cells are more granular, stain more faintly and contain numerous fat droplets; those of the kidneys lining the tubules, especially of the cortex, are also filled with drops of fat. These gross changes are readily detected, and if facilities are at hand they should be sought for. But the importance of an immediate diagnosis will have long passed before the finer histologic changes may be observed. I have said that the above appearances are constant in the cadaver of yellow fever. The question then arises as to their diagnostic value. Is it possible to arrive at definite conclusions from an isolated case presenting all of these signs? Would we be justified in such cases either in withholding quarantine protection from a community or in initiating quarantine to the possible detriment to commerce? The last phase of the question is a most important one, and at times exercises as much influence as the first.

From recent observation I feel safe in asserting that it is not possible to diagnose this disease from the appearances and the gross microscopic findings alone. I do not undervalue their importance, when taken in due consideration with the history of the case, the clinical charts and the history of albuminuria, in assisting to form an opinion, but in the absence of these accompanying facts they are not sufficient to name the disease, although a diagnosis may be safely ventured in the absence of any other known cause of infection. Just here I will venture tentatively upon the question of etiology, as having a direct bearing

upon what has been said. All observers in this field have recorded the presence of the bacillus coli communis in its many forms in the blood of patients living, and more freely in the blood and tissues of those dead from yellow fever. Sternberg in 1889 discovered, among other forms in the tissues of such patients, a bacillus of such peculiar physiologic and vegetative characteristics that he assumed for it a distinctive position among these organisms and, from its influence upon animals, a possible etiologic value in this disease. This was the Bacillus "X." In 1897 Sanarelli, of the University of Montevideo, published the discovery of a bacillus supposed to cause the disease—his Bacillus "Icteroides." These organisms present many similar features of growth and chemic reaction, yet there are sufficient distinguishing characteristics to insure them separate places in the group of colon organisms, for, during my observations upon these and other organisms from yellow fever cases, it became evident that the former belonged to this group and it appeared probable that the bacillus of Sanarelli was also to be classed among them.

On September 28, 1897, it was my privilege to observe a case of yellow fever at the isolation division of the Marine Hospital Service detention camp at Fontainebleau, Miss., in the person of one Goodrich, and from cultures from his blood, on the fourth day of the disease (which was well marked), to isolate a bacillus, which corresponded to that of Sanarelli, from a contaminating colon bacillus. This was designated Bacillus "Goodrich," and was esteemed the first organism isolated after Sanarelli in this country. Later, in the city of Havana and in concert with my colleague, P. A. Surgeon H. D. Geddings, United States Marine Hospital Service, this bacillus was isolated from a number of cultures taken at autopsy from cases in the isolation hospital in New Orleans during the epidemic of last year. Besides the organisms isolated by us from these native sources, it was our privilege to study a limited number of cases of yellow fever in the military hospitals of Havana, and in 60 per cent. of these we isolated the same bacillus. In all of these instances this organism maintained its distinctive characteristics from the Bacillus "X."

Experimental inoculation with these organisms were usually fatal to animals, which exhibited more or less pronounced, rapid or prolonged symptoms of intoxication, but necropsy always

gave similar appearances in the different organs. As an example I give the notes from an autopsy. "Pig No. 2, white female, weight 525 grams, was injected intra-peritoneally with 7 c. c. of a twenty-four hour bouillon culture of *Bacillus* 'Goodrich,' at 3 p. m., on the 9th of February, 1898. On the morning of the 10th the animal exhibits evidence of distress, does not eat, remains crouched in cage, abdomen tender; temperature, 37.3; respiration, 80. At 3 p. m. the animal is quite ill and has lost 42 grams in weight. At 9 a. m. on the 11th it died. Necropsy immediate. Body still warm; heat first exposed, in diastole and full of dark fluid blood; the vasa vasorum distended over the great vessels at the base; pericardium and fluid slightly tinted. The liver is congested with numerous plaques of a yellowish-white fatty appearance; when incised this fatty appearance is general. The spleen is slightly increased in size and congested. The kidneys much congested and swollen. The urinary bladder contains 6 c. c. of urine which, by the cold nitric acid test, gives a dense 'ring' of albumen, and which is also shown with heat and nitric acid. Peritoneum not inflamed, some injection at the point of puncture to left of median line; in the left iliac fossa there is a small quantity of cloudy fluid localized. Mesentery normal save an intense engorgement of its vessels, especially in its duodenal reflection. In the stomach the mucosa is congested, thickened and softened, especially about the pylorus; that of the duodenum much congested with numerous small extravasations, but no free hemorrhage. Cultures from blood of organs and from the fluid from the fossa give after twenty-four hours colonies only from the latter. This is a pure culture of the inoculating organism. After forty-eight hours tubes from the left pleural fluid also exhibit colonies of this organism in pure culture, the spleen also giving a colony from contamination. Cover preparations show only a small characteristic rod in pure culture from the fluid in the iliac fossa."

In this case there was no free blood in the stomach or bowel, but in the very next of my series there is this note: "Mucosa (stomach) injected, and near the pylorus there are ecchymosis, and at one point at least there is free hemorrhage, which has stained the food mass a dark or black color; this looks like 'coffee grounds.'" This experience has been that of many other observers. These organisms elaborate a toxin which exerts a characteristic and powerful influence upon the vasomotor sys-

tem, as evidenced in the intense engorgement of the vessels, the gaseous, toneless pulse, and the full diastolic heart, prior to and post mortem; also in that rapid metamorphosis of the albuminoids of the highly organized cells of the liver and kidneys. The intention is not to contrast these organisms, but to accentuate the fact that there is no constant sign at these autopsies by which we can name the particular one which has produced the disease.

Here I will revert to the subject proper, the value of these post mortem appearances in the human body. And again I must refer to notes kindly furnished me by Dr. B. E. Baker, of the army general hospital at Key West, Fla., in order to illustrate their value. The U. S. S. *Yankee*, cruising on the southern coast of Cuba during June, 1898, entered Key West harbor. She sent to hospital a seaman ill for one week with appendicitis. Her officers later stated that a few Cubans had been entertained on board during this time, and that several boats' crews had been sent on board of captured vessels for the purpose of destroying them, but that no baggage or effects had been allowed on the vessel excepting four dogs and a few machetes. On the third day after entering hospital and the second after operation for appendicial abscess, the patient developed high fever, became delirious and died on the fourth, the entire illness being about ten days. Prior to death the acute exacerbation (the temperature having fallen to normal after the operation) and the mental symptoms attracted attention. The skin was noticed to be jaundiced and suffused, as were the eyes. Urine contained no albumen at this time, but found to contain it after death. At autopsy the general appearance of the body impressed the operator, Dr. Baker, with the probability of its being the subject of yellow fever, and I was asked in consultation. After a careful examination of the body and organs I concurred in the diagnosis of yellow fever.

Necropsy (made five hours post mortem): White male adult, poorly nourished; rigor marked; conjunctivæ slightly jaundiced; pupils normal; post mortem lividity on back and neck and dependent portions of the body, on scrotum and prepuce; the face, neck and anterior portions of trunk a bronze yellow color, not so marked on the legs. On section there is about 12 c. c. of clear bile-stained fluid in the pericardial sac; the membrane contains a few ecchymotic spots in its reflection over the diaphragm; the

visceral reflection also is ecchymotic, and presents extravasations of blood well marked at the base of ventricles; the vasa vasorum distended; the heart normal in size; the left ventricle contains small amount of soft blood clot; the right auricle and ventricle distended with dark fluid blood; valves competent; muscle is pale and yellowish; aorta tinted, some atheroma about valves. The pleura shows old adhesions; the lungs are normal. The abdominal cavity is dry; the intestines sticky; the mesentery and the omentum show ecchymotic patches; the glands are enlarged. The spleen is normal in size and color. The kidneys are slightly increased in size, congested, the stellate veins of the capsule well marked; the inner edges of the cortex, near the bases of the malpighian pyramids, show a yellowish tinge; supra-renal bodies normal. The liver is normal in size, of typical "nutmeg" appearance, with lemon-yellow areas and spots scattered over the surface; the gall bladder contains 45 c. c. of thick greenish-black bile. On section the liver presents a typical "nutmeg" appearance and much congestion. The stomach is somewhat dilated, and contains 250 c. c. of brownish-black fluid with brown granules; the mucosa is congested throughout, but especially on the posterior wall near the cardiac extremity. (When washed there were great plaques of deep wine-colored extravasation and numerous erosions.) The mucosa of the duodenum is ecchymotic and there is free hemorrhage in the form of black vomit. The last inch of the ileum is bound down by adhesions, as are the caput coli and the cœcum. On freeing the gut a small abscess cavity is seen between it and the abdominal wall, in which is the vermiform appendix, with a slough in its distal portion, the upper two-thirds being normal. (The cavity was drained through an incision through the abdominal wall).

In this case there was no doubt in my mind that death had been caused by infection with one of the organisms of the group already named; but with which one? Here there was an acute appendicitis, with localized abscess and perfect drainage. Was it clear that death had taken place from a general infection from the colon group? Not at all, for this patient had been possibly, or probably, exposed to the infection of yellow fever through the presence on board his ship of persons who may have conveyed infection in their clothing. The time elapsed since such possible exposure was about the incubation period of the disease. If we assume that the fever developed in hospital, it must have been

contracted on the ship, since there has been no yellow fever in this city during this season. In this remarkable case, remarkable because of the element in it of serious possibility, amounting to probability, of exposure to the infection of yellow fever, contrasted with the fact of local, if not a general, infection with the bacillus coli communis, I concurred in the diagnosis of death from yellow fever honestly, for this was a yellow fever cadaver, as we know them from external appearance and anatomical facts. However, I am now convinced that it was simply an intoxication from auto-infection with some member of the colon group of organisms. For, notwithstanding the fact that the crew of the Yankee was composed of young northern men, the New York Naval Reserve, and that the surgeons, nurses, attendants and neighboring patients were reagents, there has been no sequel to the case, nor is it reasonable to assume that this seaman, ill in his cot from appendicitis, should have been the only one of all the reagents on this ship to have contracted the possible infection.

The city of Key West is the base of naval operations against Spain. Its poor sanitary condition, the presence of a large number of non-immune residents, and the necessity of keeping the base open, all seemed to me to demand the diagnosis which we made; for under the circumstances the only harm possible would be the restraint placed upon the inmates of the hospital for the prescribed time and extra vigilance upon the part of the medical officer on board the ship. Only a few minutes after the post mortem one of the medical officers, a reagent, asked me: "How much danger of infection have I risked from my presence at the operation upon this case and my having visited it several times since?" I replied: "None, provided this man has not come into contact with the infecting agent of yellow fever." Moreover, I felt willing to assume the responsibility, provided also all blame, in continuing the routine of the hospital without other restraint than strict vigilance until some sequel demanded its isolation. However, was the autopsy in this case of material assistance of itself? In the absence of any history of possible infection, could anyone familiar with the appearances in the organs of animals killed with the organisms mentioned, and comparing these with those found in yellow fever organs in man, have unhesitatingly decided in this case? Yellow fever clinically studied has impressed many observers, since I have heard it frequently ex-

pressed among the profession in southern cities that it is a disease in which probably two etiologic factors are present—the primary, or external agency, giving rise to the initial symptoms of the disease, and a secondary, or internal agent, of auto-infection.

Is it not possible, from what has been shown, that the auto-infection may be productive of the autopsic appearances? This view of the disease is reasonable, but not yet proved; nor will it be until the indubitable cause of yellow fever is discovered; that is, an agent which not only can give rise to the appearances of yellow fever, especially post mortem, but can, as in the case of bacillus diphtheriæ, give rise to an acute dissemination of the disease among those who are reagents. This has not been demonstrated either in the case of the Bacillus "X" or of Bacillus "Icteroides." We should not hastily decide upon the etiologic value of an organism, so closely allied to the colon group as are the two named, from the influence exercised upon the sick by the exhibition of its anti-serum, but depend rather upon its power to reproduce the disease, "catching" from person to person and of the anti-serum to prevent such infections. Finally, I would suggest that typical autopsic findings should always be regarded with suspicion and demand immediate investigation of their cause. Should there be or not any local center of auto-infection, there should be an investigation of the immediately preceding history of the patient, and should there prove to be evidence of exposure to infection of yellow fever, and should the clinical charts and history present the evidences of the diseases which we have learned to recognize, then, and only then, can the information gained post mortem be of decisive value to the diagnostician.

INFECTIOUS CONJUNCTIVITIS.—Copheg (Soc. Belge d'Ophthal.) gives the following classification: The gonococcus may cause purulent, catarrhal, granular or pseudo-membranous conjunctivitis. Weeke's bacillus may cause catarrhal, phlyctenular, purulent, granular and pseudo-membranous forms. The streptococcus may cause lachrymo-catarrhal, pustular and pseudo-membranous forms. Staphylococci may be responsible for catarrhal, purulent, phlyctenular and pseudo-membranous conjunctivitis; and the Klebs-Loeffler bacillus for catarrhal and pseudo-membranous conjunctivitis.—*Memphis Medical Monthly.*

Editorial.

H. M. FOLKES, M. D., BILOXI, MISSISSIPPI,

Editor and Business Manager.

CGLLABOLATORS.—H. A. Gant, M. D., W. A. Carnes, M. D., H. A. Minor, M. D., H. H. Haralson, M. D., H. N. Street, M. D., C. L. Horton, M. D., Wm. Krauss, M. D.

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SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

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UNTIL the evidence is all in it is outrageous to criticise the medical department of the army for the deplorable condition of camps at various points. Somebody, of course, is to blame, but let us await the result of a fair and impartial investigation, which will surely be had, regardless of politics. From what Dr. Senn has said and written the medical department of the army

at Santiago certainly did its full duty. However, the investigation will bring it all out.

* * *

AFTER this season of quarantine and fever is over we will take occasion to write the history of the whole outrageous affair. Just at present the sense of injustice and imposition is too strong to permit one to take that cold, calm survey that the situation demands.

* * *

THE appeal sent out by the State Board of Health to the national government will doubtless be promptly answered. It is a most unfortunate state of affairs which compels our State to make such a call upon outsiders, and it is sincerely to be hoped that no future occasion will arise for such a step.

* * *

THE burning of the church containing a man sick with yellow fever in Tallahatchie county was a most deplorable affair. From the manner in which the newspapers reported it, one is led to believe that the man was not dead. It is sincerely to be hoped that the papers are mistaken in their veiled allusions, for if they are true no State has been guilty of any crime so great as the murder of a dying man until our own commonwealth wrote this record on its pages.

* * *

FROM a private letter we learn that Dr. Tackett will soon return to assist in treating the fever sufferers in this State. We hope that he will soon arrive and expect him to do so, as this is characteristic of the man to go where humanity calls.

Dr. Humphreys of the Third Mississippi has been advanced to the grade of surgeon.

Dr. Sheppard of same regiment takes rank of captain and assistant surgeon.

Public Health.

CAUTION TO BE EXERCISED BY BOARDS OF HEALTH IN DESTROYING PROPERTY.—The language of the Arkansas statute is that municipal corporations shall have power to cause “any nuisance to be abated.” From this and the other provisions relative thereto, the supreme court of the State holds, in the case of *Gaines vs. Waters*, decided Jan. 8, and rehearing denied Feb. 19, 1898, that the city council is authorized to confer upon the board of health power to abate nuisances dangerous to the health of the inhabitants of the city. It takes the view that a board of health is an instrumentality of the city, and that the city has the right to make general rules to be carried out by the board of health as its agent. The board being but an agency of the city, its acts in reference to the abatement of a nuisance are, in effect, the acts of the city itself. The contention that a city council can not delegate to the board of health the power to determine judicially that a certain structure or other thing is or is not a nuisance, the supreme court goes on to say, has no bearing on the case, for the reason that the council itself has no such power, nor does the board of health in abating nuisances, exercise judicial powers within the usual meaning of such term. There is no requirement that parties interested shall be given notice and an opportunity to be heard, nor does the statute contemplate a judicial hearing before the city council or board of health in matters of this kind.

On the other hand, there is no authority to destroy property not a nuisance, and the resolution of a board of health that a house, for example, is a nuisance, the court says, does not make it a nuisance unless it be one in fact, nor is such resolution a judicial determination of that question. This leads the supreme court to make the even more practical, general suggestion, that it follows, therefore, as a matter of common prudence, that in summary proceedings by a city council or board of health to abate a nuisance, when the imposing party has no opportunity to be heard, that great caution should be exercised that property may not be unnecessarily destroyed, and further, for the reason that if it should turn out that a house declared by either of these bodies to be a nuisance was not such in fact, and its removal unnecessary, those removing it might become liable for an action in damages.—*Journal of the American Medical Association.*

Abstracts and Extracts.

LABORDE'S METHOD OF RESUSCITATION IN APPARENT DEATH FROM ANESTHETICS.—Place a piece of linen around the tip of the tongue, and grasp it with the thumb and middle finger, now pull the tongue forward with a jerk, and then relax it again; repeat this manœuvre twenty times a minute. A sense of resistance is felt in the tongue before there is any attempt at respiration. Traction should be continued for thirty or sixty minutes. This method is said to be useless in late stages of narcosis, though in the early stages as an adjunct it is said to be of great utility.—*Southern Practitioner*.

YELLOW FEVER IMMUNES.—Dr. J. C. LeHardy, Health Officer of Savannah, Ga., who has practiced through seven epidemics of yellow fever, is of the opinion that there is no such person as a "yellow fever immune;" that any person, although he has had yellow fever, is still liable to contract the disease if exposed to it. Said Dr. LeHardy on the subject: "The general belief is that you cannot have yellow fever twice. This is an error due to a lack of actual knowledge of the disease. Some persons never have it, but I have treated others four times during one epidemic (three times with black vomit). I have treated others three times, and many twice. Again, I have treated, in 1854, persons who had the disease in 1820 and in 1830. In 1848 I attended numbers who suffered again in 1854. In 1876, the last time we had the fever in Savannah, I had patients who had been victims of three previous epidemics.—*Medical Fortnightly*.

The above, republished in the *Atlanta Medical and Surgical Journal*, is of interest to us at the present time in view of the prevalence of the bugaboo in certain sections of the south. The doctor's experience, so far as our reading extends and observation in Cuba, is unique. That a certain per centage do have a second attack is well known and is estimated by numerous observers as two per cent; some of the Spanish military surgeons assuring us, however, that none had a second attack. With our recent knowledge of the pathology of the disease, these second attacks occurring in the course of an epidemic are

attributed to a true secondary septic intoxication with the remainder of the fever bug holding the predominant place and tincturing the symptoms.

* * *

Therapeutic Hints, By H. N. Street, M. D., Gloster, Miss.

SERUM TO PREVENT DEATH FROM BURNS.—Tommasoli recommends the injection of artificial serum to prevent death from extensive burns. The patient upon whom this method was first tried died from the effects of his burns, but the second one was saved after having received 8 to 16 oz. of serum daily for a number of days.

Treatment of cancer by application of arsenious acid may be rendered painless by adding to the acid an equal amount of orthoform.

For pulmonary œdema in children it is recommended to give one to three drops of the tincture of strophanthus every three hours. Diuresis is produced and œdema is quickly diminished.—*Medical News*.

USE OF ANTIPYRINE IN SCIATICA.—Kuhn recommends hypodermic injections of antipyrin in sciatica, but relief from pain will follow only the remedy coming in contact with the affected nerve. Several times a day an injection of an aqueous 50 per cent sol. is made along the course of the nerve a little below the trochanter and sciatic tuberosity. Results have been rapid and lasting, but varying with the intensity of the affection.

TREATMENT OF DELIRIUM TREMENS BY SULPH OF ATROPIN.—Touville has successfully treated a number of patients by means of hypodermic injections of this drug. In almost all cases a dose of 1-60 grain produced deep and quiet sleep.

ICHTHYOL IN ACUTE LARYNGEAL CATARRH.—Cieglewicz claims remarkable results in both adults and children from inspiration of a cold 2 per cent sol ichthyol. Treatment is carried out once or twice daily for a period of 3 to 5 minutes by means of a Richardson atomizer and causes rapid decrease of the cough and hoarseness.

TO REMOVE PLASTER SPLINTS.—A note in the Fort Wayne

Medical Journal suggests the use of vinegar to soften plaster of paris splints so that they can be cut easily with a knife or scissors. Another excellent method, it says, is to use a strong solution of bichloride mercury, simply moistening with the solution along the line to be cut. Either vinegar or sugar will quickly remove the plaster from the hands,

LAXATIVE FOR A CHILD.—

R.—Manna _____ 3iii
 Magnesia Carb _____ 3vi
 Sulph loti _____ 3vi
 Mellis _____ 3iii

M. Sig:—One-half to one teaspoonful.

FOR INFANTILE CONVULSIONS.—

R.—Moschi _____ gr viii
 Acaciæ _____ 3ss
 Aq. foeniculi, a a _____ 3i
 Syr. aurantii, a a _____ 3i

M. Sig:—One teaspoonful every 1 or 2 hrs.—Solomon.

FOR OBSTINATE VOMITING.—

R.—Tinct iodin _____ gtt x
 Ag. destil _____ 3iv

Met Sig:—Tablespoonful in half glass of sweetened water between meals.—Stiffen.

FOR IVY POISONING.—Keep affected parts wet with freshly made limewater and give the following mixture internally:

R.—Ext. Tritici fl _____ 3iv
 Spts Etheris Nitras, a a _____ 3i
 Syr. Limonis, a a _____ 3i

Met Sig:—One teaspoonful 4 times a day.

LOCAL APPLICATION FOR GOUT.—

R.—Potass iodid.

Linriment saponis, a a _____ 3iv
 ol. Cajaputi
 ol. Cari, a a _____ 3ss
 Spts. Rect. T. Sod _____ 3vi

Met Sig: Apply on lint and cover with protective.—*Medical News*.

* * *

THE X-RAYS IN WARFARE.—The army hospital ship, "Relief," has proven to be one of the most valuable adjuncts to

our forces in the Spanish war. Her unusually complete equipment has rendered it possible to care for the wounded and sick soldiers as well, if not better, than they could have been cared for in a shore hospital. As already noted, the "Relief" is equipped with a complete X-ray outfit, donated by The General Electric Company. This apparatus, it is now stated, must be credited with a large part of the success in performing operations on those soldiers dangerously wounded. In almost all the cases of complicated wounds, the X-ray apparatus has been used to locate the bullet or to determine the nature of bone fracture, usually with a high degree of success. Seventy-five radiographs have been taken by Dr. W. M. Gray, of the "Relief," and will be forwarded to Surgeon-General Sternberg at Washington. One of the most interesting of these radiographs traces the course which struck a private in the region of the right elbow. The picture shows that its course was up the right arm, across the chest and down the left arm, finally stopping in the left forearm, the bone of which it broke. The surgeons of the "Relief" are enthusiastic in praise of the aid rendered by the X-ray outfit. We believe that after this experience no nation will ever again go to war without equipping its army with one or more hospital ships and providing them with a full complement of X-ray apparatus.—[*Electrical Review*.

Medical News and Miscellany.

Both Dr. Tackett and Dr. Anderson have tendered their services to the State in event of a general epidemic of yellow fever. Dr. Tackett has been second in command at the yellow fever hospital at Santiago for some time past. His address is Yellow Fever Hospital, in the Harbor, Santiago.

The following are some of the papers which will be read at the 10th annual meeting of the Tri-State Medical society which meets in Birmingham October 25, 26 and 27:

President's Address—J. A. Goggans, Alexander City, Ala.

Early Diagnosis of Cancer of the Uterus—Thos. E. Cullen, Baltimore, Md.

Acute Anterior Poliomyelitis—E. D. Bondurant, Mobile, Ala.

A Case of Complete Obstruction of the Common Sile Duct by Floating Gall Stone—W. H. Hudson—LaFayette, Ala.

A Simple Operation for Hemorrhoids Without Injections, Ligature, Clamp Cautery or Crushing—R. R. Kime, Atlanta, Ga.

Total Amputation of the Penis so that the Patient Can Urinate Normally—H. M. Hunter, Union Springs, Ala.

Impotence—W. H. Mangun, Georgiana, Ala.

Extirpation of the Pancreas—H. Berlin, Chattanooga.

Two Cases of Surgery—S. W. Purifoy, Lownesboro, Ala.

Fracture of the Spine—Presentation of Two Cases.—B. G. Copeland, Birmingham.

The Treatment of Intestinal Obstruction and Constipation by Electric Injections—R. P. Johnson, Oak Park, Ill.

Conservative Gynaecology per Rational Medication.—R. H. Hayes, Union Springs, Ala.

Ectopic Gestation—W. E. B. Davis, Birmingham.

Modern Treatment of Corneal Opacities With Report of Cases.—M. L. Heffelfinger, Huntsville, Ala.

Keratitis.—A. A. Greene, Anniston, Ala.

Purulent Ophthalmia—New Method of Treatment—Frank Trester Smith, Chattanooga.

Fevers of Alabama.—Charles McAlpine Watson, Florence, Ala.

Some Fevers of St. Clair Co., Ala.—Eugene P. Cason, Ragland, Ala.

Continued Malarial Fever in Southeast Alabama.—Wm. R. Belcher, Daleville, Ala.

Typhoid Fever.—H. Eugene Mitchell, Oneonta, Ala.

Typhoid Fever.—E. A. Mathews, Clanton, Ala.

Typhoid Fever.—J. D. Gibson, Birmingham, Ala.

Typhoid Fever—Report of Cases.—C. L. Guice, Harris, Ala.

Some Suggestions in the Treatment of Typhoid Fever.—J. C. LeGrand, Birmingham.

Diphtheria.—H. L. Appleton, Cedar Bluff, Ala.

Chorea.—S. W. Fain, Chattanooga.

Suggestion in the Healing Art.—E. T. Camp, Gadsden, Ala.

NEW ORLEANS POLYCLINIC.—Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, particularly laboratory work. *The twelfth annual session opens November 24th, 1898.* For further information address New Orleans Polyclinic, P. O. Box 797, New Orleans, La. s to ap

SANMETTO IN GENITO-URINARY DISEASES.—SUBSTITUTION.—I have prescribed Sanmetto with much satisfaction in diseases of the genito-urinary organs, with marked benefit in prostatic trouble of old men, and in different kinds of urethral inflammation, *even in gonorrhea.* It is certainly an excellent vitalizing tonic to the reproductive system. I am using original packages, except very rarely in smaller quantity, and then I am absolutely sure that no substitution is practiced, as I see to it with my own eyes, if necessary, that the genuine article is gotten by my patients. I have an honest registered pharmacist, though, and have little apprehension as to him. The subject of substitution, so largely practiced, is one of pre-eminent importance, and needs to be watched by all physicians with both eyes.

JOSEPH W. ROBB, M. D., Russell, Kan.

The JOURNAL has been honored with an invitation to the marriage of Miss May Hoyer to Dr. William Weston Reynolds, on October 5, 1898. The best wishes of the JOURNAL are cordially extended the happy pair.

SURGICAL CONVALESCENCE, WITH REPORT OF BLOOD COUNT IN TWENTY CASES.—Several months ago I received a visit from an agent of the M. J. Breitenbach Company of New York, manufacturers of Gude's Pepto-Mangan, who stated that his firm was anxious for me to test their preparation on surgical cases and to publish the results. I agreed to do so, provided I be allowed to utilize the first twenty major cases on which I operated, and that his company supplied me with the drug and paid the cost of the necessary blood counts.

I append a report of twenty cases. Eleven of them were private patients at St. Luke's Hospital, and nine were clinic cases at the Virginia Hospital. The histories are taken from official records, augmented by the blood counts made by Dr. M.

D. Hoge, Jr., Professor of Pathology in the University College of Medicine.

When it is remembered that the patients were all confined to bed; that they were recovering from the effects of serious surgical operations, and that they were subjected to the depressing influence of hospital life, the average increase of red blood corpuscles is remarkable.

Case II—Mrs. M. K., aged 29, patient at St. Luke's Hospital; cystic disease of ovaries and chronic inflammation of appendix; double Beattie-Tait and appendectomy; gave Gude's Pepto-Mangan twenty days; first count, 3,950,000 red corpuscles to the cubic millimetre; second count, 4,000,000 to the cubic millimetre; discharged well.

Case III—Miss C. H., aged 22; patient at St. Luke's Hospital; history of frequent attacks of hepatic colic—no jaundice; opened the gall-bladder and removed a calculus one inch in diameter; gave Gude's Pepto-Mangan twenty-eight days; first count, 3,940,000 red corpuscles to the cubic millimetre; second count, 3,900,000 to the cubic millimetre; bile still escaping from fistula, but patient otherwise well.

Case IV—Miss A. N., aged 32; patient at St. Luke's Hospital; history of sudden peritonitis, accompanied by profound sepsis; exploratory incision revealed a pedunculated fibroid tumor of uterus, gangrenous from twisted pedicle; myomectomy; gave Gude's Pepto-Mangan thirty-six days; first count, 3,800,000 red corpuscles to cubic millimetre; second count, 4,000,000 to the cubic millimetre, good recovery.

Case V—Miss E. J., aged 17; patient at St. Luke's Hospital; spinal irritation from a fall; anæmic, emaciated and confined to bed for more than a year from contraction of ham-string muscles; electricity, massage and passive movements; gave Gude's Pepto Mangan forty days; first count, 3,650,000 red corpuscles to the cubic millimetre; second count, 4,425,000 to the cubic millimetre; her menses, which had been suppressed, became regular; she fattened twenty pounds and left the hospital walking with a cane.

So it was with the other sixteen cases every one of which showed marked and steady improvement, with the single exception of case fifteen, a hypochondriac.

The Tenth Annual Meeting of the Tri-State Medical Society

of Alabama, Georgia and Tennessee, will be held in Birmingham, Tuesday, Wednesday and Thursday, October 25th, 26th and 27th. The prospects are for a large and successful meeting.

INTESTINAL ANTISEPSIS IN FEVERS.—As an intestinal antiseptic we have nothing better than salol. The consensus of opinion is in this direction. When we add the antipyretic and anodyne effects of antikamnia, we have a happy blending of two valuable remedies, and these can not be given in a better or more convenient form than is offered in "Antikamnia and Salol Tablets," each tablet containing $2\frac{1}{2}$ grains antikamnia and $2\frac{1}{2}$ grains salol. The average adult dose is two tablets. Always crush tablets before administering, as it assures more rapid assimilation.

INSTRUCTIVE EXHIBITS.—"One of the chief attractions at the annual gatherings of The American Medical Association is always the exhibition hall, where the principal drug, instrument and food products of the world, the results of years of experimental research and labor, are placed in view. Among the many attractive exhibits at this year's Denver meeting, that of Imperial Granum, recognized by many leading physicians as the standard among prepared foods, occupied a prominent space and the representative in charge was kept busy explaining to the visiting physicians the superiority of this preparation. Hand-some sample boxes of the food, and copies of the Imperial Granum Co.'s valuable clinical record, were presented to each physician in attendance."—From "The Journal of the American Medical Association," Chicago.

ACUTE INFLAMMATION OF THE PROSTATE GLAND.—"The Journal of the American Medical Association" for August 20th, contains a report on inflammation of the prostate gland, which was presented to the Section on Surgery and Anatomy at the forty-ninth annual meeting of the American Medical Association, held at Denver, Col., June 7-10, 1898, by Liston Homer Montgomery, M. D., of Chicago, Ill. His plan of treatment in acute inflammation of the prostate gland is to wash out the abscess cavity with hydrogen peroxid, give copious hot water enema and hot hip baths frequently, avoid morphine internally

and advise care lest the patient strain at stool or during micturition. On the theory that toxins are retained in the circulation and within the gland, and to prevent degeneration in the gland substance, he administers *triticum repens* or fluid extract *tritipalm* freely, combined with gum arabic or flaxseed infusion. Along with these remedies the mineral waters, particularly vichy with citrate of potash, go well together. Hydrate of chloral or this salt combined with antikamnia are the very best anodyne remedies to control pain and spasms of the neck of the bladder.

SANMETTO RELIEVES QUICKLY IN PROSTATIC TROUBLES. To say that Sanmetto does all that could be reasonably expected of it, in all troubles of the genito-urinary organs, is not an adequate description of its therapeutic value. For it aids in any congestion, more or less, and is therefore an invaluable remedy for all congestions, especially of the prostate gland, affording relief quickly.—H. A. GROSS, M. D., 1858, Medical Department Washington University; St. Louis Medical College, St. Louis, Mo.—DRAKE, MO.

The Journal

.....of the.....

Mississippi State Medical Association.

VOL. II.

NOVEMBER, 1898.

No. 8.

Original Articles.

Some Observations of Brain Anatomy and Brain Tumors.

Dr. William C. Krauss of Buffalo, read a paper at the Ninety-second Annual Meeting of the Medical Society of the State of New York, Albany, January 25, 1898, with the above title.

He called attention, first, to the difficulty in remembering the gross anatomy of the brain, and, second, to the almost universal presence of optic neuritis in cases of brain tumor.

He attempted to overcome the difficulty in regard to the anatomy of the brain by formulating the following rules, which are somewhat unique and original, and at the same time easily remembered:

RULE OF TWO—First—The nerve centers are divided into two great divisions, (1) encephalon, (2) myelon. Second—The encephalon is divided into two sub-divisions, (1) cerebrum, (2) cerebellum. Third—The cerebrum, cerebellum and myelon are divided into two hemispheres each, (1) right, (2) left. Fourth—The encephalon is indented by two great fissures, (1) longitudinal, (2) transverse. Fifth—Into these two great fissures there dip two folds of the dura, (1) falx cerebri, (2) tentorium cerebelli. Sixth—There are two varieties of brain matter, (1) white, (2) gray.

RULE OF THREE—First—There are three layers of mem-

branes surrounding the brain, (1) dura, (2) arachnoid, (3) pia. Second—Each hemisphere is indented by three major fissures, (1) sylvian, (2) rolandic or central, (3) parieto-occipital. Third—Three lobes, frontal, temporal and occipital, on their convex surface are divided into three convolutions each, superior, middle and inferior, or first, second and third. Fourth—There are three pairs of basal ganglia, (1) striata, (2) thalami, (3) quadrigemina. Fifth—The hemispheres of the brain are connected by three commissures, (1) anterior, (2) medi, (3) post-commissure. Sixth—The cerebellum consists of three portions, (1) right, (2) left hemisphere, (3) vermes. Seventh—There are three pairs of cerebellar peduncles, (1) superior, (2) middle, (3) inferior. Eighth—The number of pairs of cranial nerves, in the classifications of Willis and Sommering, can be determined by adding three to the number of letters in each name; that of Willis making nine, and that of Sommering making twelve, (or the name containing the more letters has the larger number of pairs of nerves, and vice versa.) Ninth—The cortex of the cerebellum is divided into three layers of cells, (1) granular, (2) Purkinje's cells, (3) a molecular layer.

RULE OF FIVE—First—Each hemisphere is divided externally into five lobes, of which four are visible, (1) frontal, (2) parietal, (3) temporal, (4) occipital, and one invisible, (5) insula (Isle of Reil). Roughly speaking, the visible lobes correspond to the bones of the cranium, that is, the frontal lobe is underneath the frontal bone, the parietal lobe beneath the parietal bone, etc. Second—The brain contains five ventricles, of which four are visible, the right and left, or first and second, the third and the fourth; and one invisible, the fifth or pseudo-ventricle. Third—The cortex of the brain contains five distinct layers of ganglion cells.

Studying carefully one hundred cases of brain tumor, in which an ophthalmoscopic examination had been made for the presence or absence of choked disc (optic neuritis), Dr. Krauss announced the following conclusions:

1—Optic neuritis is present in about ninety per cent of all cases of brain tumor.

2—It is more often present in cerebral than in cerebellar cases.

3—The location of the tumor exerts little influence over the appearance of the papillitis.

4—The size and nature of the tumor exerts but little influence over the production of the papillitis.

5—Tumors of slow growth are less inclined to be accompanied with optic neuritis than those of rapid growth.

6—It is probable that unilateral choked disc is indicative of disease in the hemisphere corresponding to the eye involved.

7—It is doubtful whether increased intracranial pressure is solely and alone responsible for the production of an optic neuritis in cases of brain tumor.—Philadelphia Medical Journal.

Sensational Journalism and Hysteria.

By WILLIAM LEE HOWARD, M. D., BALTIMORE.

The antagonist of judgment, morality and foresight is morbid impulse. This morbid impulse is a symptom of hysteria. Hysteria exhibits itself in exaggeration, wonder-mongering, subreption, perversion of facts, and anxious, feverish desires to keep the ego before the public's eye. The unfortunate victims of hysteria will go to any extreme, mental, physical or financial, to satisfy their diseased craving for notoriety, the pabulum necessary for the existence of the hysterical subject.

Although directed in different channels, spread broadcast by the modern scientific methods of news dissemination, ostensibly printed and circulated at great cost from purely national and patriotic motives, the basis of yellow journalism is as certainly an hysterical one as were the manifestations of wonder-making, miracle-producing epidemics of the fourteenth and fifteenth centuries, when egotistic, bombastic, sensational devouring prelates shouted their "extras" of a new and marvelous cure through possession of the devil, thereby causing the hysterical element of the community to commit insane acts, criminal deeds and political mistakes, for which the sane portion of society were held responsible. Let us make a clinical examination of the yellow journals and arrive at a diagnosis. We find at once that broad statements made yesterday in the yellow journals regarding some political event is denied to-day by journals in good health, while our patients remain silent. An interview with one of the ministers of any department is an excuse for an "extra;" while, this same interview is denied in toto the following day by the victimized official.

It is one of the characteristics of the hysteric not to remember bumbles, blunder and plunder. Contradiction of a fact stated by them is a stimulant, a charming seducer which ever feverishly allures them into further distorted and untruthful byways. To be noticed, recognized, whether with ridicule or contempt, it matters not, is the life, the pulse throb of the hysteric—ignore his existence and he ceases to be.

The earliest observers of hysteria noticed the boundless mendacity in this affection. All mental efforts are made to attract attention, court remarks and disturb the peaceful routine of a community. The hysterical need, crave something new and marvelous every day. Night and day the yellow journals show these well-known symptoms. New sensations must be found, manufactured or imagined daily. No matter how impossible or nasty, the morbid mobility of the mind of our patients, the excessive excitability of the imagination, demands stories—stories often without a basis of truth or reason. The conscience is misty and muddy; made so by all sorts of ridiculous and senseless ideas. The sign hung over the door of the editorial room, which should read "Temple of Truth," has been changed to one reading "Mosque of Mendacity."

Sexual and religious emotions are the fundamental causes of hysteria and always prominent symptoms of the disease. See how well the yellow journals accentuate these facts. On one page we will have a story dealing with a repulsive sexual crime, prurient details surrounding the life of the victim, and nauseous particulars concerning her companions. Then will follow, on the same page, illustrations of some notorious actress's lingerie, or salacious hints at the unfaithfulness of some European prince, the escapade of one of the *jeunesse doree* of the paper's city, and a featured account of the intrigue of an American woman with a gypsy fiddler. Turn to another page and we will find historical sketches of some saint or virgin; an alleged account of some new facts in the life of our Saviour, as revealed by some obscure monastic writer; pictures, modern and ancient, of the crucifixion; and colored supplements redolent of angels, virgins, martyrs and all the insignia of dreamy and religious mysticism.

The cry that the public demand these papers is partly true. Hysteria is contagious and soon becomes epidemic. A large proportion of the public is controlled by suggestion. It is through suggestion that hysteria becomes epidemic. Given a

neurotic individual who reads daily a yellow journal, or one who, in other words, is receiving daily suggestions of a nature which disturbs the emotional element in him, and we soon have an hysterical individual. This case rapidly affects others brought into contact with it, and the certain ultimate result is an epidemic of hysteria which is exhibited in the workshop, on the street and at the fireside.

There is no doubt in the minds of those who study the insane and the criminal but that the suggestions offered by the owners of sensational journals is the seed planted which ripens into lust, murder and plunder. It can scarcely be otherwise when the auto-suggestive ideation, which exists in a class whose impulses have never been inhibited, is the only ideation fully developed.

Nordau blundered when he stated that hysteria was increasing. Had he studied the history of medicine well he would have seen that instead of taking the old form of religious revivals, the belief in demon possession, the epidemic of the Jumpers and the action of the Flagellants, it has only changed to a physically milder form in its support of the yellow journals. Let the yellow journals cease publication for a week—time enough for the suggestive influence to be lost—and there will be no demand for them.

The starting point, the focus from which all this injurious suggestion emanates, is that morbid entity, hysteria, which has taken its Titan-like grip upon the diseased nervous systems of the editors.

The prominent feature in the yellow journals which attracts the attention of the psychologist is the rabid impulsiveness. Rabid impulsiveness is a phenomenon demonstrating peculiar mental states.

This impulsiveness may take various forms and phases; when it takes the form exhibited in the yellow journals it shows a diminished resistance to judgment, acumen, moral discrimination and personal responsibility; in fact, to that popular expression "common sense," a term full of meaning.

Kahf Ali remarked: "I have often observed that men are more like the times they live in than they are like their fathers." Were he living to-day he would be able to say some newspapers are more like the men who own them than they are like the times.

If one should be able to find a trace of philosophy in these journals it would be certain to be that dreamy, mythologic, deductive, false method of arriving at alleged facts so beloved by Plato. The hysterical individual could never be mentally healthy enough to work through the calm, tedious, yet perfect reasoning by the inductive method of Aristotle.

Like most epidemics of hysteria, this one of yellow journalism will soon reach its ebb and remain one of the curiosities of psychological medicine; and any attempt as to the interpretation of emotional development, and to the subsequent interpretation of the sociological phenomena accompanying emotional development as seen by the career of these journals, will be relegated to the study of abnormal mental states and allied conditions.

Any act or thought that disturbs or arranges our normal mental attitude, any suggestion, subjective or objective, that is teasing and repugnant to our sentiments, aesthetic and moral, is as injurious to our well-being as would be a physical disease which temporarily suspends and disarranges our mental power. Such a factor in disturbing the mental growth and power of the adolescent, as well as the degenerate, the neurotic and the illiterate, is the yellow journal. The effect on the normal mind, the intellectual individual, after reading one of these journals is marked. He will toss the paper down with disgust, and remark with Anaxagoras, "Nothing can be learned, nothing can be certain, sense is limited, intellect is weak, life is short."

After struggling through one or two Sunday editions the reader is inclined to think of Schopenhauer's remark that the universe is just as bad as it conceivably could be without falling to pieces altogether. Then the reader will continue to purchase one of those hourly "extras" with its scare heads and reiterated rumors and warnings of a great sensation to be made public on the morrow, until his feelings revolt against the vacuity which has been thrust upon them, and he inclines to believe with Novalis, that the simultaneous suicide of all human creatures is the one way of escape from miseries that are both unbearable and irremediable. Later in the evening the rapid, strident shouts of some great sensation, printed in polychromatic form, arouse the dying curiosity for the last time, and purchasing a paper the reader soon arrives at the conclusion of Chabot, that what we mistakingly call the cosmos is really the work of a crazy devil.

To the neurologist who looks over a few of these daily sheets it is plain that they are the products of psychopathic editors, whose hysterical convulsions find an outlet in this abnormal manner. Only a few days ago an editor of a yellow journal was taken away from his desk in a state of insane delusion due to the continued hysterical demand made by his employer for sensations, distorted and twisted facts, imaginary happenings, heroic predictions and divinations.*

As hysteria is contagious through suggestion it follows that the nature of the contracted hysteria depends upon the nature of the suggestion. The nature of yellow journal suggestion distributed among the masses in our large cities is destructive to all intelligence. By the suggestions offered by these journals morals are debased, intelligence is not advanced and society is pictured in its lowest condition through scandals and inuendos; while politics are shown to be controlled by the baser element of mankind under the fatuous plea of exposing corruption for the weal of the community. Social sewers are dragged so that the undesirable refuse cast away by respectability, the proof of every earnest man's desire to improve self and progeny, may be flaunted should any individual aspire to honest political preferment. The editors stand on the highway tearing bandages off from putrid, sickening sores that they may be seen by the passerby, while each and every owner of a yellow journal shouts his shibboleth, "*Humani nihil a me alieum puto.*" The owners of these publications have torn the laurel from the brows of decent intellectual journalism, and replaced it by the ivy—the companion of death.

From their diseased point of view every election is a revolution in prospect and expectations. Whatever is right and sacred is attacked. They invade the privacy of the gynæceum and disturb the solemnity of the tomb. They are instruments for the exploitation of sin and the perpetuation of crime. In fact, they make up a perfect clinical picture of hysteria when, after a thorough examination, we find they can be brought down to the psychopathic unit—no living force, nothing that can assist the well-being or happiness of communities. With the hysterics truth, reason, philosophy and decency are superstitions of the past;

*The striking in the face of General Shafter by a yellow journal reporter after the raising of the American flag at Santiago only accentuates the condition I ascribe to the mental state of these psychopathic employes of sensational journals.

ineral perspicacity a puritanical myth; respect for the government and patriotism insulated in the gloomy umbrage of egotism and personal aggrandizement.—New York Medical Journal.

Syphilis.

Among all the diseases that afflict humanity there are none accompanied by as many morbid processes and affecting so many tissues of the body as syphilis, and none equal it in the endless variety of manifestations. In its progress it imitates and at different times assumes the livery of innumerable diseases of the skin, requiring on the part of the physician a profound knowledge of its pathology to trace it to the original lesion. Often the initial lesion has disappeared before the attention of the physician is called to the disease, or been hidden from view by its obscure lodgment, when the difficulties of diagnosis are multiplied, but by bearing in mind a few of the following features of the disease they may be largely overcome: First—A chancre with an indurated base un-anto-in-oculable, with multiple glandular involvement. Second—A sharply limited round cell infiltration of the upper part of the corium and accompanying papillæ. Third—An incapability of the cells for a higher organization. Fourth—Retrograde changes of fatty degeneration and absorption or ulcerative degeneration, which invariably begin in the center or oldest part of the infiltration. Fifth—Red and engorged fauces, with a tendency to development of mucous patches, and finally chronicity with recurring proclivity of the eruption. There is also an absence of the subjective symptoms, such as itching or pain that attend other similar morbid processes. There are but few diseases accompanied by ulceration, and they are mostly lupus, lepra, epithelioma, varicose ulcers and syphilis. The first mentioned generally have special seats for development, or are at once recognized by their history and concomitants, so when ulcers are found in syphilis, by a process of exclusion we can readily arrive at safe conclusions in diagnosis. The first lesions of the skin are small, superficial, abundant and in the upper part of the corium, with a symmetrical and general distribution, whereas later lesions are deeper, larger, less numerous and more regional, resulting in graver injuries to the tissues when terminating in ulceration. The lesions of th

skin appear generally in order as follows: First, muscles; second, papules; third, vesicles; fourth, pustules; fifth, tubercles; sixth, gummata; but papules and pustules may be the first skin manifestations, while tubercles and gummata are always later lesions, accompanied by bone, visceral or nerve involvement. There are three conditions that qualify the course of syphilis—the constitution of the patient, his hygienic surroundings and the virulence of the poison. A scrofulous subject, an aged or very young person, or one who indulges to excess in alcohol, or irregularities of life will become the victim of its gravest form. Syphilis, like other diseases, may be benignant or malignant. It may be so insignificant in its pathology as to require very little treatment, or it may be so malignant as to engage our most watchful care. The safety of the patient requires intelligent and persistent treatment as long as there is the least evidence of constitutional contamination. He should be as pliant as wax in the hands of the physician, or the physician, for his own reputation, should abandon the treatment. As soon as the disease is recognized, treatment should begin, both constitutional and local. Constitutional treatment should take the lead—some preparation of mercury should be resorted to, and if it agrees with the patient, the proto-iodide is the best, beginning with one grain, three times a day, or as much as can be given without causing ptyalism. If griping and diarrhœa ensue, add a little opium or hyoseyamus to the proto-iodide and continue this preparation of mercury until the eruption of the skin disappears, when the dose may be reduced until no more than one-fourth of a grain is taken in twenty-four hours. The local treatment should consist of mild antiseptic astringent and sedative applications to the chancre. Lomel, one part to ten parts of sub-nitrate of bismuth may be dusted on the chancre two or three times a day, or a pledget of lint saturated with "black wash" may be used to advantage. Irritative applications should be avoided unless there should be some special indications for them, such as phagedenic tendency. We find anæmia in this disease very often a troublesome feature, in which case it will be necessary to resort to iron in some form in connection with mercury, and when we can safely suspend the mercurial treatment as above outlined, to meet indications, as alternatives, restoratives and tonics, we have derived remarkable results from the exhibition of the "Six Iodides," as prepared by the Walker-Green Pharmaceutical

Company. This preparation contains all the medicinal ingredients desired, in a most acceptable form, with the proportions definitely given in the formula on each bottle, so that it can always be intelligently prescribed. We have here iron, potash, manganese, mercury, soda and arsenic, combined with iodine and such aromatics as are calculated to render them palatable and efficient. Each one of the iodides in this preparation wields a power and performs a duty in the way of eliminating toxic material and restoring tone to the debilitated organs of a syphilitic, but that power is tenfold increased by the combination of this preparation. It can be given for an indefinite period without unpleasant effect. It may also be combined with other medicine indicated at any period in the treatment. It is not safe to discontinue treatment, or at least observation of the case, until one year has elapsed after the complete disappearance of every symptom of the disease. If at any time nervous or visceral complications arise it may be necessary to give in addition to the "Six Iodides" as much iodide of potash as the system can tolerate, to be withdrawn as soon as these conditions are eliminated. We should always bear in mind that we cannot trifle with this disease, as the interests of the patient may not alone be involved, but those of his offspring and society at large.—*St. Louis Medical Era.*

Military Surgery in Santiago.*

Lieut. Col. Senn, M. D., U. S. V., chief of operating staff with the army in the field, has published in the *Medical Record* a most interesting article on recent experiences in military surgery after the battle of Santiago.

This report is particularly apropos, coming as it does so close after the innumerable and confusing newspaper articles on the effects of the modern bullet, and it clears up much of the doubt which has existed regarding the action of the Mauser ball used by the Spaniards.

Dr. Senn found that the small jacketed bullet seldom carried into the tissues clothing or other infected substances. Most soft tissue wounds, uncomplicated by visceral lesions, healed by

*As observed by Lieut. Col. N. Senn, M. D., U. S. V., Chief of the Operating Staff in the Field.

primary intention in a short time. When infection followed it was usually confined to the superficial portion of the wound; the wound of exit was more frequently affected than the wound of entrance. Wound infection was due to inadequate supply of first dressings; faulty application of first dressings; unnecessary change of dressings.

The evils of "meddlesome surgery" were apparent during the Cuban campaign. Dressings were changed too often and evil results followed frequently.

Bullets imbedded in soft tissues were usually found loose in small cavities filled with liquid blood or bloody serum and with evidences of encapsulation. The new bullet will become encapsulated more readily than the old leaden bullet.

In ten per cent of the wounded the bullet was found in the tissues. This was unexpected and was found to be due to the harum-scarum marksmanship of the followers of the flag of fire and blood. The condition of the recovered bullets showed beyond doubt that they were deflected or had passed through a resisting medium before striking the object for which they were intended.

Dissection and the X-ray have superseded the probe. The probe was never used on the Relief, the X-ray locating the ball. Dr. Senn found the course of the new bullet in the great majority of cases to be straight.

The wounds are classified in the report into (1) the head, (2) the neck, (3) the spine, (4) the chest, (5) the abdomen, (6) the extremities.

In wounds of the head, death, when not instantaneous, was due to intracranial infection, encephalitis and leptomeningitis constituting the fatal complications. Intracranial inflammation was announced by cerebral hernia.

In spinal wounds, death follows serious laceration of the cord. Death is due to septic leptomeningitis or sepsis and exhaustion from decubitus.

In chest wounds the chances of recovery are better now, for the reason that the small ball does not carry with it foreign material. Except where the hemorrhage was severe the symptoms were mild. Treatment was by the expectant plan; in no case was the pleural cavity opened.

In abdominal wounds, the campaign, he says, has "more than ever confirmed my convictions that not infrequently cases

of penetrating gunshot wounds of the abdomen will recover without active surgical interference."

"For years," says Dr. Senn, "I have maintained, as the result of clinical experience and experiments on the cadaver, that a bullet may pass through the abdomen on a level with and above the umbilicus in an antero-posterior direction without producing visceral injury demanding operative intervention."

Four laparotomies were made at the first division hospital; all died. These were the only cases during the Cuban campaign to Dr. Senn's knowledge.

A number of perforating wounds of the abdomen were on a fair way to recovery without operation before they were sent home on transports.

In wounds of the extremities few primary amputations were made. A number of thigh and leg wounds, which became infected, are being treated by establishing free tubular drainage and resorting to antiseptic irrigation.

Dr. Senn reports a number of very interesting cases illustrative of the various classes of wounds and his latest work is a decided acquisition to surgical literature. His complete report will be valuable indeed to the student of modern surgery.—*Buffalo Medical Journal*.

Alternating Personalities.*

BY HENRY S. DRAYTON, M. D., NEW YORK.

The discussion of those cases in which the expression of character undergoes very marked alterations, to the extent it may be of complete reversal of a recognized disposition, involves several distinct theories of causation. We have, for instance, the hypnotic or suggestion theory, which would appear to go a long way toward accounting for the changes. In this we must assume a modification of the relation and activity of the mind faculties, a re-grouping of the forces dominating in the life of the individual, so that traits previously marked in the conduct become passive or subdued by the energetic expression of traits or qualities that had hitherto performed a secondary or indifferent part. In other words, what was strong

*Read before the Psychological Section Medico-Legal Society, May 26, 1898.

and salient has become suddenly weak in influence, and what was weak has become strong and dominant. Such a change would give necessarily the appearance of a new personality to those acquainted with the individual, and operate as a surprise, even to those most familiar with him. We may assume that suggestion in many such cases acts immediately; that some person known to the individual under hypnotic control is the object or model of imitation. Of course the same result may obtain in auto-suggestion, although it is but rational to assume that there was some powerful exterior influence that gave direction to or colored the suggestion.

That was a very interesting case—in which Prof. James of Harvard, took part in investigating, of the man who suddenly left his home in Northern Massachusetts, and went to Norristown, Pa., where he engaged in the hat and cap business successfully for three years, under a name entirely different from his own.

One day, while at the table in the hotel where he was boarding, he suddenly astonished those present by asking where he was, and insisting that his name was not that by which he was known in Norristown, but that it was so and so, and that he lived or belonged to a certain town in Massachusetts. The three years he had spent in the Pennsylvania city had suddenly become a blank in his memory.

This we know to be the case as a rule in the transfer of consciousness, that there is a complete loss of memory of what occurs in the secondary state or personality. However, in experiments with hypnotized persons, the trance state may present degrees of advancement in which the two memories, so to speak, of the normal mind condition and of the secondary, may be associated. This occurs, so far as my experience goes, in cases of incomplete hypnosis, the state of trance presenting a passive, mechanical docility on the part of the hypnotic.

The Norristown case belongs, doubtless, to the category of auto-suggestion, its events indicating a cumulative result. The man had been accustomed to dwell upon the necessity or expediency of making some change in his business and social relations, led to this, we may assume by certain, to him, unpleasant circumstances. The intensity of his thought in this direction finally terminated in a crisis of physical experiences, and a

mental revolution. This hypothesis would largely resolve the riddle of it.

The theory of inhibition or suspension of activity of certain faculties has its advocates in an attempted explication of the phenomena of change in personality. In somnambulism we may have the induced trance and the subjected will, so far, an inhibition of self-control, but I am not so sure of the suspended activity of a group of faculties; for the somnambule may exhibit an exaggerated degree of intellect and emotion, and greatly exceed the mental capacity of the ordinary state. "How," as one writer pertinently asks, "Can the mental faculties be increased by rendering some of them inoperative?" We may speculatively answer the query by saying that the controlling stress of certain faculties being removed, the others operated with greater vigor in response to the suggestions given. Just as in uncompensated muscle effects.

Another hypothesis that seems to have its supporters among persons of reputation for neurological ability, is based upon the idea of atavism, or ancestral influence, in the organization. According to this, physical peculiarities, tendency to certain diseases, peculiar characteristics of mind and special habits derived from a remote parent, may crop out, after having skipped over several generations. Dr. K. O. Mason puts it in this way: "Suppose, for instance, there appeared a man of marked and thoroughly bad characteristics, married to a right-minded, moral, even religious, woman; that he was a vilifier of morality and religion, profane and vicious in life, and unscrupulous in his dealings with others; that the generations which immediately succeeded him came under influences which, aided by inherited characteristics from the mother, led to lives of morality and uprightness, or even conspicuous piety. In the fifth generation, however, appeared a man who, in the midst of these moral and religious environments, was conspicuous for his profanity, vicious life and unscrupulous conduct, so identical with his remote ancestor as to make the connection undoubted."

What became of "the black drop" in the blood of the intervening generations is accounted for in this fashion by the same writer: "In the fourth generation was a mild, religiously inclined woman, but of unsound health, and perhaps of unstable personality. Some sudden shock, syncope or loss of con-

sciousness occurs and, as in the case of Felix X, on recovery an entirely new and different personality is found to have taken the place of the original one. It professes to be a man, and to the horror and consternation of the good people surrounding her, she commences to curse, to villify everything good and uphold sentiments and practices of the most offensive and criminal character. This person has a chain of memories and a personal history entirely foreign and unknown to the primary self, but quite consistent with those of the remote ancestor whom we have considered. In an hour or a day the primary consciousness has returned, but there is not the slightest knowledge or recollection of the character which she has represented in her second personality, and very likely the case is diagnosed as temporary insanity; in a more primitive age it would have been called possession by an evil spirit. It was in reality the strongly impressed characteristics of a distinct personality which had lain dormant in the sub-conscious self for three generations, now coming to the surface temporarily under favoring circumstances in the fourth. In another generation it actually appeared, an atavism, as the primary and usual personality. In like manner a personality of conspicuous goodness or conspicuous talent might pass over many generations of mediocrity or of evil-doers, and appear, a pleasant atavism, after one or many generations had intervened. Less extreme personalities might be formed in like manner, and more than one might be impressed upon individuals in successive generations, giving rise to the perplexing and much debated condition of multiplex personalities. Kraft-Ebing, as we have seen, found in his patient 'three psychical existences' or personalities. Prof. Janet's patient "Adam B., possessed three widely differing ones; while one of my own cases presented three and another two, alternating spontaneously at longer or shorter intervals, not including the cases in which changes of personality were brought about by hypnotism.*

Accept the theory of atavism, of an hysterical crisis, and the case seems well made out. But on the physiological side may we not extend our reasoning farther and see in these differing expressions of character the modifying effects of a changed relation of the psychic centers of the brain?

*Question of responsibility here opened by the juriconsult, if we are to accept this theory of atavism to account for criminality.

In the case of Prof. Janet's patient, his differing personalities were the sequence of hypnotic suggestion, influencing a sensitive mental organism. These personalities were imitations or assumptions of characters known to the patient, and she, possessing doubtless a good degree of the power to mimic others, readily exhibited it. We speak of people as having different moods which merely express differential action of their mental faculties. We have only to intensify a mood to produce what may appear to be a personality of a kind that may contrast strongly with the character as known.—*Medico-Legal Journal*.

Medical Expert Testimony.*

BY J. B. RANSOM, M. D., PHYSICIAN CLINTON PRISON.

Circumstances preventing acceptance of your esteemed invitation to present to your Society at its meeting on the 19th instant, my views upon the best methods for obtaining medical expert testimony, and feeling a deep interest in the matter, I beg to submit the following suggestions upon the pending discussion.

In February, 1895, Drs. C. F. McDonald, H. E. Allison, S. B. Ward and E. D. [unclear] and myself were appointed by the Medical Society of the State of New York a special committee to report upon the most favorable plan for an improvement in the method of obtaining medical expert testimony.

As chairman of that committee, I at once instituted an extensive correspondence with men in both the legal and medical professions, most likely to make valuable suggestions and render wise opinions. As a result of all this work, a measure was reported, which essentially incorporated the features of the so-called New York Bill, with which you are, no doubt, familiar. This Bill failed to become a law, or even to be reported out favorably by the judiciary committee on an alleged constitutional infringement in the matter of restricted cross-examination. Since that time the committee has been continued, and has restricted its work to a study of the several measures and expressions made in this direction in several and societies, and no other measure has been brought forward.

*Read before the Medico-Legal Society, January 19, 1898.

My personal views, as the result of three years' experience, are substantially expressed in the following proposed measure. The bill mentioned above was defective, first, in that it did not define an expert, by establishing a standard of qualification. Second, that it failed to specify as to how the report should be made to the jury or court. Third, the unconstitutional feature of restriction in cross-examination.

Such a measure should provide for the appointment, in criminal trials, of medical experts by the court or presiding judge, who shall appoint such expert witnesses, not exceeding three in number in each case, to pass upon all hypothetical questions. Said experts shall have access to all evidence, and to the person of the defendant, in the presence of all the experts called, as well as have power to examine medical witnesses as to their knowledge of the facts, and also to hear expressions of their opinions relative to the significance of observed facts, when willingly given. It should also be provided that the judge may hear proposals from counsel as to the appointment of experts in any given case. The expert or experts shall submit to the court, for transmission to the jury, a report in writing attested by their oath, setting forth their conclusions, together with the facts upon which they are based. The report shall be signed by all the experts taking part in the examination, providing they agree upon the essential points at issue, if not, a dissenting report or reports may be made by individual experts, the same as opinions are handed down from the appellate courts. In case of a disagreement as to essential points, the judge should have power to dismiss the report, together with the experts making such report, and appoint other experts should he deem it advisable. If counsel demand it, these experts may be sworn as witnesses and cross-examined in such manner as the presiding judge may deem pertinent and necessary to the case.

The experts so appointed shall be persons of repute, holding a certificate of qualification as hereinafter described, in the particular branch of medical science to which the question calling for expert opinion relates. Compensation for such service shall be fixed by order of court, at a rate which shall be reasonable for professional services of such a nature, and paid in the same manner as other court expenses.

The above-named certificate of qualification is to be issued by the Board of Regents, and filed in the county clerk's office in

the county in which the holder of such certificate is a resident, such certificate to be obtained in the following-named manner:

The applicant for a certificate of expert qualification shall furnish reliable evidence to the State Board of Medical Examiners that he is legally qualified to practice in the State of New York and is of good standing in the medical profession; that he has had not less than five years experience in the practice of the special branch in which he desires to qualify as an expert. On the passing of such examination to the satisfaction of said board there shall be issued to him, in the same manner as a license to practice is now issued, a certificate of qualification to give expert testimony in the particular branch or branches therein specified, and when properly filed, all physicians holding such certificate shall be eligible for appointment by the courts, or may be called by the defence as expert witnesses. The testimony of any medical witness called by either plaintiff or defendant, not holding such certificate, shall be restricted to evidence in fact.

It is only by setting up a standard of qualification that anything like a satisfactory definition of the expert witness can be made, and it is only through this means that the medical profession and the courts can be protected from a species of so-called expert testimony, which we are strenuously endeavoring to eliminate. Further than this, should all other features of this proposed measure be declared unconstitutional, this one of qualification will stand, for certainly there can be no constitutional objection taken to the qualification of the expert, more than to the qualification of the medical practitioner. This in itself would be a long step in advance.

If judges were always unbiased, were always unmoved by the appeals of partisans and friends, if they could always be relied upon as good judges of the particular qualification of a scientific man, then these requirements of qualification might be dispensed with, but as we know that judges are human and fallible and the medical practitioner or the courts cannot afford to rest decisions upon anything less than qualified opinions.

It is claimed that appointment of experts by the court does not protect the defendant, but there seems no more reason in saying that both the prosecution and defence should be provided for in the calling of the expert witness, than in that both the plaintiff and defendant should each be provided with a judge. It should also be remembered that these expert witnesses as ap-

pointed are no longer partisan, but are judicial in their functions, and are for the purpose of seeing justice done to all parties concerned. The great burden of opposition to these measures arises, or seems to arise, from the fear that the defence in a criminal trial, shall not have the privilege of calling to his aid the whole population it may be, as experts to testify in his behalf. The expert witness knows nothing necessarily of fact in the case, and his evidence, therefore, was not provided for in the early practice of common law. It would seem that either side of the case at issue would be more likely to receive exact justice from a non-partisan disinterested board of experts, than from a haphazard promiscuously chosen one of experts of doubtful qualifications, even if paid by their respective sides. It would seem no more a violation of the constitutional rights of the defence for a judge to appoint his experts, than is the action of the judge in deciding the rules of the admissibility of evidence. If the court has a right to determine what is pertinent to the case under the constitution, he clearly has a right to determine a correct interpretation of the facts by a competent body, able to pass upon such facts, and there always remains the right of appeal, and there is nothing in this measure to prevent other licensed experts from being called by the defence.

In formulating any measure, which will most nearly meet the requirements in the direction of the best methods of obtaining medical expert testimony, there are three essential things to be considered. First—The protection of the state or people. Second—The accused. Third—The profession. In the suggested measure the first is met by the appointment of all experts by the courts. In the second, the accused finds his protection in the justice and fairness of an impartial board of experts, to pass upon any and all questions of a hypothetical nature evolved from proven facts, and thirdly, the profession finds its protection in the qualification of the expert appointed.

A great deal of the trouble in the formulating of any satisfactory measure, lies at the door of the law, but it is not altogether with either the legal or medical professions. Before any satisfactory working measure of procedure can be put in operation, there must be a modification of the laws, and to obtain this there must be co-operation of both the professions of medicine and law; neither profession alone can easily accomplish the desired result, there must be united effort.

There is especially an important feature in the matter of evidence to be determined, and which to properly settle would probably require a change in the rules for governing the admissibility of evidence, and that is the admission of a very important form of so-called expert testimony, which is the expression of opinion based upon personally observed facts, such evidence, however, not being expert evidence proper. With reference to the constitutional right of the defence in calling expert witnesses other than those appointed by the court, I do not think we need to consider; for so long as a standard of qualification is set up, there can be little feared from a qualified expert in opposition to the regularly appointed expert by the court. He would stand in an enviable position, and no doubt after a short time the practice of calling such experts would give place to depending upon the experts appointed by the courts, as I believe the superior opinions rendered would in time come to inspire confidence, and a sole reliance upon their reports to the court.

A bill meeting the above enumerated requirements in some degree would seem to be as satisfactory as could be formulated at this time. It must not be expected that any measure can be framed that will in every particular be perfect, and not open to some objection; it is nearly if not quite impossible to frame any measure which will not come into conflict with some trifling rule of procedure; but if we are to stop for that no progress will ever be made in this direction. We must adopt the practice of the courts in other things and get approximately as near to the perfect standard as circumstances will permit. One great trouble seems to be that while all are agreed that reform in this direction is necessary and desirable, a revision is expected without making any changes. Some things must be left to work themselves out in the framing of this measure. It should also be remembered that expert testimony has really no part in a trial by jury, "the expert witness is not called to state what he knows, but what he thinks," (Maber), his function is to pass upon the significance of certain proven facts, and in this respect he is entirely unlike the ordinary witness, and his true function is that of an instructor or adviser to the court, and this was the original function of the expert, and for this purpose came he to be a figure in the English courts. He should not, therefore, be considered an ordinary witness, but should constitute a part of the court.

The greatest stumbling block in the way of remedial legislation is the construed constitutional right of the defence. I confess I never knew anything of constitutional rights until I began this work; so much luminosity has been shed upon this feature, so much tender solicitude evinced by certain practitioners of the law in this regard, that I have come to wonder how the rights of the defence ever came to be relegated to the province of the judicature; or how it has ever come about that so many mentally irresponsible individuals have paid the death penalty or been relegated to the grim environment of prison cells. In my meanest moments there have come to me shadowy, occult suggestions that perhaps if there was less contradiction, less confusion in the giving of expert testimony, perhaps there would be less litigation. Notwithstanding unreasonable constructions of the law, notwithstanding the tendency of the legal profession to cling to precedent and historic habit, notwithstanding the laxity, indifference and opposition of some members of the medical profession, notwithstanding the inertia of the legislature the consensus of learned opinion is with us in this effort, and I believe that in this state especially we shall soon see spread upon its statute books a law which will meet in a large degree the requirements of common justice and a respectable criminal trial.—*Medico-Legal Journal.*

An Interesting Case.

By H. M. FOLKES, M. D., BILOXI, Miss.

Mrs. O. G. S., aet. 25, primi para, child, aet. 6 months; had been feeling tired and worried for past week or ten days, when on evening of July 18 had a hard chill. I was called to see her and at 8 p. m. found her with a pulse of 126 and temperature of 104, some little pain in head but feeling well, and remarked that she then had no fever but had had. She had previously taken calomel and quinine; her husband being a druggist had given her a thorough course of both of these.

Next morning her pulse was 120 and temperature 104, that evening pulse 120 and temperature 105. A preliminary diagnosis was made, as it was insisted upon, of either typhoid or sepsis. On morning of 20th pulse was 120, temperature 104 2-5; that evening pulse was 114, temperature 104 4-5; next morning

pulse was 120, temperature $104\frac{1}{2}$; that evening pulse was 120, temperature $104\frac{4}{5}$; about this range continued until evening of July 22, the pulse was 114, and temperature $98\frac{1}{5}$, this was at 10:15 o'clock, temperature then began to rise and by 7 o'clock was $102\frac{1}{5}$. It then ranged along at about this state, with pulse in proportion, until morning of July 27, when at 5:10 she suddenly had an intense chill and the temperature flew up to 108, pulse 150. I was at once summoned and on arriving at 5:30, only resided one block from patient, found her in collapse with pulse of 160 and temperature $108\frac{2}{5}$. The temperature had been taken by a trained nurse at 5:10 with her own thermometer and at 5:30 was taken by myself with my thermometer, so there can be no doubt as to the accuracy of the record. At this place will interject plan of treatment for this emergency so as to make a connected account. On arrival found patient enfolded in numerous blankets and surrounded with hot water bottles. At once gave an hyperdermatic injection of brandy and strychnia and nitro-glycerine, had her blankets taken off and had her wrapped in sheet wet with ice water, then had her rubbed through the sheet with lumps of ice, had an injection of two ounces of alcohol in a quart of ice water pumped into rectum, had a lump of ice placed over abdomen. Continued injections of brandy, strychnine and trinitrin every two hours.

By 6 o'clock temperature was $106\frac{1}{10}$, by 7 o'clock $104\frac{2}{5}$, by 9 o'clock 103, by 2 o'clock $101\frac{2}{5}$. Pulse had fallen in proportion and was much better. In this condition she remained for two days, temperature ranging at about 101 and pulse about 112. The abdomen began to swell on night of 27th and was marked on 28th, when at 12 m. she had a hemorrhage from the bowels, at which time her temperature was $100\frac{1}{5}$ and pulse 120. Her pulse then jumped to 140, temperature remaining stationary. Applied ice to abdomen and pushed hypodermics of strychnia and brandy and trinitrin. Reacted and did nicely until 6:55 p. m., when she had another hemorrhage and pulse flew up to 150, temperature $101\frac{2}{5}$. Pushed hypodermics and gave rectal injection of ice water. Began to improve and so continued with pulse and temperature running along at about 120 and 102 respectively. During this time only complained of pain in right side on moving, and had marked gurgling in fossa. On night of August 1, about 2 a. m., temperature began to rise and by 6:25 was 106, pulse 138. Had a chilly feeling between 2

and 6. I was summoned and at once renewed former tactics with hypodermics and supplemented with a hot water bag over heart. Abdomen began to swell once more, but there was no hemorrhage, and the bowels, when they did move, presented no indication of one. Patient was discharged September 22 as practically well. Had no temperature for ten days preceding.

A diagnosis was positively made on the evening of the 20th as being typhoid. Archinard, to whom a blood specimen had been sent, reported typical typhoid reaction. This patient had had an attack of typhoid sixteen years before. Treatment from the beginning had been supporting. A liquid dietary had been rigidly enforced and pushed. She was not allowed to starve. Medication consisted of such remedies as were indicated, Viskolein was pushed and seemed to have the best effect I have ever seen from an antipyretic in a case so weak as was this one. Phenacetine was used but appeared to have a more fugacious effect than did the Viskolein, though its immediate effect was quicker. Turpentine was continued throughout the case. Quinine was pushed to its limit twice, but without any effect beyond making the patient miserable. Digitalis, glonoin, strychnine and brandy formed the sheet anchor of stimulation for internal use, while hot water bags over the heart were invaluable in periods of depression. Syringing continued throughout. Duero and peptonoids and bovine were excellent adjuvants.

This case was particularly interesting to me for many reasons, among others was a difference as to diagnosis on the part of two constituents, one of whom considered it a case of malaria, the other said it was acute miliary tuberculosis, and both thought she would die. I thought so once, the time her temperature went to 103.2-5, but after contending that she would recover. She did. She developed quite an attack of bronchitis at one time during the attack, but it only lasted a few days. At no time did her urine contain albumen, though twice was there a trace of sugar.

Her sister who nursed her has recently gotten up from an attack of typhoid in New Orleans, where she went after Mrs. S. recovered, thus proving an additional factor as to the diagnosis.

The temperature run was certainly remarkable and seemed to bear out the idea of tuberculosis, as did also the duration of the hemorrhages from the bowels and a peculiar shotty feel under the skin of the arms, but she recovered and that almost pre-

cludes any idea of miliary tuberculosis, then there was the reaction of typhoid, typical and complete. Could the blood give a reaction sixteen years after the attack?

The malaria theory contained nothing. The only symptom of malaria was a high temperature. The patient was a little woman run down from nursing a sickly, crying child which hardly ever permitted her a whole night's rest, and the probability is that she had had fever for fully ten days before I saw her. The fact is the patient had typhoid fever, and in course of disease developed an hepatic abscess which would fully account for all unusual symptoms.

The Tri-State Medical Association of Mississippi, Arkansas and Tennessee meets in Memphis, Tuesday, Wednesday and Thursday, December 20, 21 and 22, 1898. Physicians attending this meeting are promised a pleasant and profitable time in the "Queen City of the Mississippi Valley." Titles of papers should be sent to Dr. Richmond McKinney, Secretary, Continental Building, Memphis, Tenn.

THE VISKOLEIN COMPANY.—The new antiseptic treatment for fevers and other zymotic diseases "Viskolein," has been purchased by The Viskolein Company, 5 Beaver street, New York City. Viskolein is one of the few successes of the year. Physicians generally accept the antiseptic treatment of fevers as the proper method and Viskolein as the proper remedy. Viskolein will undoubtedly abort fevers if its use is begun in the early stages of the diseases and will modify it in every case. The Viskolein treatment consists of three forms, numbered 1, 2 and 3. No. 1 (tablets), antipyretic, to be prescribed only when the temperature runs too high; No. 2 (capsules), the antiseptic proper, and No. 3 (solution), a solution of the powder (No. 2) for subcutaneous administration. Of the hypodermatic feature the *Denver Medical Times* says editorially: "The subcutaneous method is rather a novel feature in antiseptic medication and there is much to be said in its favor." The price of the treatment complete is \$3. The proprietors will send full information on application.

Editorial.

H. M. FOLKES, M. D., BILOXI, MISSISSIPPI,

Editor and Business Manager.

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SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

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QUARANTINE.

It is distressing to think that the past two summers may be followed by another equally as disastrous so far as fever is concerned, but this may happen as a war sequellæ. The opening up of the island of Cuba means a vastly increased business on the part of small wooden sailing vessels, the most dangerous fomites

known. These vessels are usually in a trade which compels them to spend some time in the various harbors and thus run a greater risk than other classes.

As a rule sailors of this category are less submissive to quarantine rules and regulations than others in better grade vessels, and in proportion to their refractions are they dangerous.

To properly control and have that authority which is essential it behooves the national government to take complete charge of all quarantines. This done it seems to the writer that even before sanitation is begun in Cuba it is essential that the government establish three gulf refuge stations to cover Central and South America and the West Indies. These stations should be situated as follows: Tortugas, Mississippi river and the Island of Cozumel. These will completely cover all danger as far as we on the gulf are concerned. For the South Atlantic states a suitable station could be located. They should be equipped regardless of expense and have such mechanical appliances as will enable them to handle vessels with little delay.

All vessels from quarantinable ports should be required to report at one of these stations as may be most accessible for them. After having undergone their required period of detention they should report at one of the stations now along the coast line for further inspection. All coast line stations now extant should be made inspection stations only. One might be allowed to retain disinfecting plant to be used as an emergency station for an outbreak after leaving one of the three; for this purpose the Mobile Bay station would be excellent as it could cover Florida, Alabama and Mississippi. There should also be maintained a sufficient number of swift revenue cutters to see that all vessels report at these stations.

An additional safeguard would be the establishing of disinfecting plants at the larger Cuban ports to do preliminary disinfection before vessels leave. With these measures of protection and the sanitation of the island, which is sure to follow occupancy by Uncle Sam, yellow fever will soon become a thing of the past so far as this country is concerned.

* * *

THE charges in the New Orleans papers that yellow fever was introduced by way of Montauk Point makes it incumbent on the various medical bodies of the United States service to defend

themselves. There were concerned in this introduction of troops from Cuba, the army, the navy and as a barrier between us and danger, the Marine Hospital Service, clothed with absolute power so far as maritime quarantine is involved. If this charge is sustained and the investigation proves this as the course of introduction, the question is respectfully and humbly asked where are we going to benefit by national supervision of quarantine. We may be doing the great city of the south an injustice, but this charge savors much of the old story of "stop thief."

* * *

A MOVEMENT is on foot to organize a Coast Medical Society. Dr. Bailey of Ocean Springs, has the matter in hand and is stirring it up in his usual energetic manner. An organization of this kind should prove an unqualified success, if political rancor can be eliminated, and a sound, scientific basis be the framework of the organization. There are many matters appertaining to this particular section of the country which offer large and unexplored fields and it is earnestly to be hoped that the society, if started, will blaze a way through these "terras incognitas," and not become a prey to the strife and faction hunter.

* * *

IN April the Editor was the author of a paper read before the State Medical Association, which laid down two essential propositions in regard to yellow fever epidemics, one was honesty in reporting cases and the other uniformity of rules and regulations for handling an outbreak. Just at this writing we will treat of the latter and reserve the first for a future day. Since the disastrous campaign of fright, frenzy and folly which held sway in 1897, has been held the Atlanta Convention. This body of able and experienced sanitarians laid down the most satisfactory set of rules which have ever been so fortunate as to secure anything like a widespread adoption. Many and varied are the changes which this years' outbreak have shown to be advisable, and it is greatly to be hoped that when the National Government does take hold, as they certainly will at this session of congress, that those rules which savor more of the surgical clinic than of practical common sense will be expunged, and thus apply a little judgment to affairs of such tremendous import to the country. No state, city or village has a right to prevent passage of articles through its confines. And likewise it were well to

remember that the government, or not any thing, can force into a community that which it may consider dangerous. Some of our commercial friends in the large cities seem to be laboring under the delusion that a National Quarantine will enable them to put their goods into any community in the country. Never was there a more grievous mistake and our mercantile people had better awaken to that fact as soon as possible. The great advantage of a National Quarantine will lie in two facts, one is the power of establishing such uniformity that rival commercial cities will have no undue advantage and the other is simply money.

Abstracts and Extracts.

THE URINE OF THE MALARIAL FEVERS.—The Journal of the American Medical Association, August 20, 1898, in its editorial columns contains a few comments on this subject that are practical:

Even when no specific action of the causal factor of this disease is exerted upon the kidneys, the urine of malarial subjects varies somewhat with the type of infection, whether regularly intermittent or æstivo-autumnal, as well as remaining to a certain degree subservient to physiological influences, as amount of fluid ingested, season, climate, time of day and the other usual considerations. In not a few cases, however, and it must be confessed that these are almost universally of the æstivo-autumnal variety, the kidneys suffer severely, either in the production of an acute nephritis, or in the hæmoglobinuria of pernicious ague, or both. □ Again, a former attack or attacks of ague may have gradually produced a chronic nephritis, upon which an attack of pernicious æstivo-autumnal fever has engrafted an hæmoglobinuria, as in the case reported by Brown ("Malaria;" report of twenty-eight cases), in which granular and epithelial casts were found in addition to red corpuseles and "shadows;" the specific gravity in this case averaged 1010.

Let us first take up the urinary changes present in the average number of ordinarily severe cases. The daily amount varies as to whether a paroxysm has occurred on the day in question or not, for at the beginning of a paroxysm it frequently happens that

a considerable amount of urine is passed. The quantity also varies with the type of infection; in the regularly intermittents it is somewhat increased, while in the æstivo-autumnal infections, when they cause a fever almost continuous in its action, the urine, as in all continued fevers, becomes diminished. When convalescence is established, usually several days after the last chill, a slight polyuria is often manifest; this rarely exceeds four pints and may last a few days or weeks, depending as a rule on the severity of the attack. As regards acidity, one would naturally expect that in fevers, concentration of the urine, other things being equal, would increase the acidity. This is true in the malarial fevers, except in cases of the æstivo-autumnal type, where the urine is not altered in this regard. The color varies greatly; where fever is present it is high, and the higher the fever the deeper the color. This fact depends upon two causes: the concentration that occurs in all febrile processes; the chill with subsequent fever is coincident with the destruction of large numbers of red corpuscles and at that time a large amount of pigment transferred hæmoglobin, is set free in the blood, to be immediately taken up by the leucocytes; while a part of this pigment is deposited in the various organs, especially the liver, no inconsiderable amount finds its way to the kidneys and appears in the urine as urobilin, which substance itself would lend deep coloring to the urine. Some cases of malaria show a jaundice more or less marked; this may vary from the slightest perceptible tingeing of the conjunctivæ to a deep yellow, the very dark colors so characteristic of obstruction never occurring in uncomplicated cases. This jaundice is always remotely hæmatogenous, a greater number of red corpuscles being destroyed than can be elaborated by the excreting organs; it occurs, as a rule only in the severer cases, usually æstivo-autumnal in character, cases in which not infrequently hæmoglobinuria has supervened. In such instances bile coloring matter may be proved to be present in the urine by means of the ordinary nitric acid contact test.

As stated above, the jaundice is only remotely hematogenous; that is to say, it only primarily depends upon the destruction of the red corpuscles. The pigment is in large part carried to the liver and a great increase in the secretion of the bile occurs, so as to rid the overcharged system of as much deleterious matter as possible. Indeed, the secretion is often so great that all can not be disposed of through the excretory ducts; a

backward pressure then occurs and reabsorption, with the production of jaundice, readily follows. In the icteric attacks bile is not very apt to be in the urine, as the kidneys very probably are able to transfer into urobilin some of the biliary compounds. It is only when the latter are in great excess that the presence of bile can be proven. As in other febrile affections, with a diminished excretion of fluid from the kidneys, there is a normal or increased amount of solids, so that during the paroxysms the specific gravity is increased, while in the intervals it is diminished, so that the total amount passed maintains a fairly good average, from 1045 to 1018. When infection is from the aestivo-autumnal parasite, and the attack of sufficient severity to cause a continuous fever, the specific gravity, of course, remains permanently high. As concerns the various normal ingredients of the urine, urea and uric acid are increased as are the various salts, phosphates, chlorines and sulphates. The striking feature about this increase is that it is specially manifest during the post-malarial stage, the period of polyuria.

Another point of interest in the solid constituents of the urine is the amount of iron. This is augmented in any febrile disease, but more so in malaria than in any other. The increase is particularly liable to be noticed after a paroxysm, and is undoubtedly dependent upon the excessive destruction of red corpuscles. The sediment of malaria is unusual from but one standpoint and that is best brought out by the use of the centrifuge; the presence of black pigment occasionally of such quantity as to produce a heavy deposit in the bottom of the tube as in the case reported by Forchheimer. Among abnormal ingredients that might appear the first place must be allotted to albumin. In all febrile affections a varying proportion of kidneys suffer, some from temporary changes, as manifested by the presence of albumin and casts which gradually disappear after the cessation of the original disease; while others are the subjects of acute inflammatory processes which do not answer readily to treatment and which finally become chronic. In such a disease as the one under consideration, where specific organisms are present in the blood, naturally the delicate epithelial structure of the kidney would be almost certain to sustain some damage. Such, indeed, is the case here, and a large proportion of malarial infections show a slight amount of albumin with an occasional cast, usually hyalin. It is rather remarkable that under the provocation pres-

ent an acute nephritis is of such uncommon occurrence. Probably of more consequence than the parasites in the production of inflammatory nephritic changes, is the irritation of the large amount of pigment set free in the blood and excreted, at least to some extent, by the kidneys, as shown by its appearance as a sediment and chemically by the increase in iron salts. A well-known law of pathology tells us that slight irritation continued over a considerable length of time will inevitably result in the presence of new-formed connective tissue, which new-formed tissue will, in the course of time, most surely undergo cicatricial contraction. Many cases of malaria, especially in the more southern latitudes where the aestivo-autumnal parasite plays the leading role, are the subjects of changes in the kidneys, of a chronic inflammatory type, interstitial nephritis, as evidenced by increased secretion of urine, pale color, low specific gravity and the presence of a small amount of albumin, with granular casts, even when the blood at the time of examination shows the patient to be free from active infection. This change is possibly due to the constant irritation of the pigment, and has been demonstrated in individuals, the victims of paludism, in whom a possible alcoholic etiologic factor can be positively excluded. The subject of malarial hemoglobinuria, while of great practical importance, is not of common occurrence, and is more properly treated under a separate heading.—Charlotte Medical Journal.

Medical News and Miscellany.

NEW ORLEANS POLYCLINIC.—Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, particularly laboratory work. *The twelfth annual session opens November 24th, 1898.* For further information address New Orleans Polyclinic, P. O. Box 797, New Orleans, La. s to ap

FOR ACUTE CYSTITIS.—Bromide of potash, $\frac{1}{2}$ oz.; fld. ext. gelsemin, 10 gtt.; fld. ext. hyoscyam, 2 dr.; lithiated hydrangea (Lambert), 4 q. s. ad. oz. Mix. A dessertspoonful every four hours. Milk and flax seed tea as drinks.—Kansas Medical Index.

MILK INFECTION.—"I have just had an opportunity of seeing the wonderful value of Imperial Granum in milk infection. I ordered the baby to be fed on Imperial Granum, prepared with pure water only, increasing by one teaspoonful the quantity of Imperial Granum directed to be used when prepared with milk. An immediate improvement and most satisfactory recovery of the case was the result." — —, M. D.—To the Imperial Granum Company, New Haven, Conn.

SANMETTO.—J. S. Jordan, M. D., of Indianapolis, Ind., writing, says: "I have been using Sanmetto for a number of years, and with unvarying good results. In cases of prostatitis, prostaticorrhea, cystitis, chronic gonorrhea and kindred genitourinary troubles I find it one of the most valuable acquisitions to our *Materia Medica*. In irritable conditions of the neck of the bladder, so frequent among females, Sanmetto has proven a God-send. I can also heartily recommend it as the very best aphrodisiac I have ever used."

THE SENSIBLE TREATMENT OF LA GRIPPE AND ITS WINTER SEQUELÆ.—The following suggestions for the treatment of la-grippe will not be amiss at this time when there seems to be a prevalence of it and its allied complaints. The patient is usually seen when the fever is present, as the chill, which occasionally ushers in the disease, has generally passed away. First of all the bowels should be opened freely by some saline draught. For the severe headache, pain and general soreness give a five-grain Antikamnia Tablet, crushed, taken with a little whiskey or wine, or if the pain is very severe two tablets should be given. Repeat every two or three hours as required. Often a single ten-grain dose is followed with almost complete relief. If after the fever has subsided, the pain, muscular soreness and nervousness continue, the most desirable medicine to relieve these and to meet the indication for a tonic are Antikamnia and Quinine Tablets, each containing $2\frac{1}{2}$ grains Antikamnia and $2\frac{1}{2}$ grains Quinine.

BENT CREEK, APPOMATTOX CO., VA., August 31, 1898.
BATTLE & Co.:

Gentlemen—Enclosed find 25 cents in stamps. Please send me sample bottle—twelve ounce—of your "Ecthol," and oblige,
E. S. VAWTER, M. D.

P. S.—I am well acquainted with your preparations, Papine, Bromidia and Iodia. Use them in all cases for which they are specified. They are now standard remedies with the profession and give satisfaction whenever used. I would recommend them to all physicians not acquainted with their potency.

The Journal

.....of the.....

Mississippi State Medical Association.

VOL. II.

DECEMBER, 1898.

No. 9

Original Articles.

Pathology of Fever.*

By H. A. MINOR, M. D., MACON, MISS.

Last year I had the honor of reading to you an essay on the Pathology of La Grippe. Further study along this line of thought suggested in that paper, has led me to write this thesis on the Pathology of Fever.

Is fever an entity? Has it a definite and certain pathology, that is a condition precedent to all cases of it? Or is it merely an ever varying assemblage of symptoms? What views of this very important subjects are held by the great lights in our profession?

I find after search no definite pathology has been agreed upon, only a great diversity of descriptions of its phenomena. Dungleson, in his dictionary, says: "Various theories have existed as to the seat of fever; it has been located in the brain, mucous membrane of the stomach, the liver, the blood vessels, the venicava. The strongest argument is in favor of the nervous system, and of the system of nutrition." Dr. Geo. B. Wood says in his Practice: "Fever is an acute affection of the system in which all the functions are deranged; the most striking phenomena being sensorial and nervous irregularity with increased

*Read before the Mississippi State Medical Association, April, 1898.

frequency of pulse." Dr. John Eberle says in his Practice: "The first link in the chain of morbid action, which occurs in the development of fevers, always occurs in the nerves."

Dr. Austin Flint says in his Practice: "There would seem to be only two anatomical systems having relations so extensive as to be able to give rise to the train of morbid phenomena which occurs in fever, namely, the nervous system and the blood." Neither Dr. N. S. Davis or Dr. Osler in their works on Practice give a definition of fever.

It is with hesitation that I venture to set forth the results of my study and thoughts on this subject—a most important one—for probably nine-tenths of the diseases to which our race are liable, embrace this. I define fever to be a "*cerebro-spinal irritation, with a ptomaine as the exciting cause, and a bacillus as the predisposing cause.*" Each specific fever is this irritation plus its own specific bacillus. And this ptomaine gives to its fever that form and that course and these characteristics and results that pertain to it.

There are cerebro-spinal irritations without fever; but there is no fever without cerebro-spinal irritation plus its ptomaine. I hope to prove that this is consistent with the phenomena of the almost infinitely varied conditions in which fever is a factor. If this be its true pathology, thus is the standpoint from which to view the stages, and the varying conditions of the disease, advanced to a higher and better vantage ground, and the physician is better enabled to base his treatment upon pathology—the only scientific method—with the assurance of better success than he could expect when it was based upon some great man's "*ipse dixit*" or upon empiricism.

To study these diseased conditions advantageously, we must have a clear conception of the powers and functions of these organs, that are affected in fever, when they are in health.

The principal symptoms of fever are due to this special irritation of that part of the cerebro-spinal system that lies between the Pons-Varioli above, and the fifth inter-vertebral space below, and these symptoms are to be observed most obviously in the respiratory, digestive, and circulatory organs, which are all supplied with nerve force from the area above named. The co-operation of the great sympathetic nervous system is indispensable to the proper performance of these functions. These two nervous systems, the cerebro-spinal, and the sympathetic act

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toward each other much as do the flexors, and extensors of the limbs; they mutually act and react, each upon the other, co-operating co-ordinating, and correllating their forces. The former controls the voluntary muscles, the latter, the involuntary. The former tends to dilate the blood vessels, the latter to contract them. The former to lower the blood pressure (arterial). The latter to increase it.

Upon these two nervous systems life and all vital activities depend. They originate all vital force and action. The rest of the body and limbs are but agents to do their bidding. In diseases this balance between these is disturbed; and function are performed abnormally. At this time we will confine ourselves to the consideration of these abnormalities, as they exist in fevers. Each specific fever has its own peculiar manner of disturbing this normal corrillation of forces,—producing results peculiar to itself. The main fever and energy of any form of fever may be expended upon any one or more parts of the nerve centres. We acquire a knowledge of what part or parts of the nerve centres are bearing the brunt of the attack, by noting what organs are functioning most abnormally, then recalling what part of the nerve centres supplies these organs with their nerve force.

All fevers have two main foci of diseased action. The first is the peripheral or visceral focus, whence comes the exciting cause. The second or centric focus, is the specific irritation of the cerebro-spinal system. That a given fever may occur, the bacilli that causes that fever must gain access to the system and must secure lodgment in that particular part of the system which, by some inherent affinity, they have power to select (eg) the typhoid bacillus finds its way to the illium, and the malarial germ to the blood. Then they begin to multiply with astonishing rapidity; then and there they begin to generate their poising, which finds ready access to the blood, and through it permeate the system. Thus reaching the cerebro-spinal system, it produces its specific irritation of those portions of the spine which that fever selects.

As said before, that portion of the nerve centres which presides over the circulation, the respiration and the digestion, embracing the main forces that carry on life, are almost invariably prominently subjected to this poisonous irritation.

Up to the period of time that the ptomaine begins to be absorbed there is no fever; it is a local affection. It becomes fever when the centric focus is established. If prompt and judicious treatment is instituted, the peripheral disease may be aborted by the destruction of all the bacilli, and their spores, and no centric irritation (fever) occurs. Or, failing in this, the bacilli may be so diminished in number, and the ptomaine so enfeebled that the centric irritation will be milder and more amenable to treatment and its duration shortened.

The ordinary and most conspicuous and most important symptoms of fever, are those referable to respiration, circulation, and heat production. We must bear in mind that *these symptoms are not the disease*. They are mere symptoms of it. *The real fever is the specific irritation of those centres which supply these organs with nerve fever.*

Fever may be divided with advantage into classes. The classification should be based upon the habitat of their respective bacillis causans.

CLASS No. 1---Those whose bacilli have their habitat in the alimentary canal--as typhoid, yellow, Asiatic cholera, epidemic dysentery, etc.

CLASS No. 2---Those whose bacilli make their homes in the lymph glands and ducts, as "lymphangitis," scrofula and probably septicemia, etc.

CLASS No. 3---Those whose bacilli live in the blood of which malarial fevers are the type. To this class probably belong the exanthemata, etc.

CLASS No. 4---Traumatic fevers---In this the bacilli generate in the wound. I forbear to name other classes at present.

I desire to devote a few minutes to the consideration of that first class. This class requires special and specific treatment of the first or peripheral focus, which often overshadows the second or centric focus. In this class the alimentary canal should be kept as nearly aseptic as possible. The contents of the canal should be kept alkaline, as bacilli do not thrive in this medium, as they do in an acid-medium. Food should be carefully selected, readily assimilable its detritus should not be allowed to remain long in the canal, that it may not be allowed to remain long in the canal, that it may not furnish a nidus for the growth of germs. Pure water should be given (ad libitum). Drs.

Woodbridge and McCormie and others have without regard to this view of pathology, very efficiently pursued the plan here drawn, with admirable results. When thus treated there is comparatively little ptomaine formed; less blood poisoning; the centric irritation is more easily controlled, and the duration of the fever is shortened.

Fevers comprised in the third class (those whose bacilli live in the blood) are more clearly understood if this pathology is accepted. We, then, see why there is so much backache; because the ptomaine in these fevers, irritating the whole length of the spine, causes a great variety of symptoms in the distribution of the spinal nerves. As usual in fevers, any part of the nervous centres may have to bear the brunt of the irritation, which is often so violent, especially in malarial fever, as to cause congestion of brain, or lungs, or bowel, or kidney, or liver.

In the second class, comprising lymphangitis, the bacilli gain entrance into the lymphatic system through minute and often imperceptible injuries, then travel along the lymph ducts to the lymph glands, inflaming these as they go, thus proceeding toward the centres of life. The bacilli multiply as usual, and produce their ptomaine, which, gaining access to the blood, irritates the centric focus, and the specific symptoms of this special fever are then produced.

I would put dissection wounds with this class.

The traumatic class gives the best illustration of this hypothesis. Here the fever is caused by pus-producing germs, which occupy the wound; there they produce their ptomaine, which, as usual, produces its own peculiar fever by its action upon the centric focus. This form of fever can be produced, or prevented as we permit the wound to become infected or keep it aseptic. Keep traumatism aseptic and there are no cocci, no ptomaines, no blood poisoning, no centric irritation, no fever. However severe the traumatism may be—be it a laparotomy or any amputation or crushed limb—there is no fever if kept aseptic.

In dengue fever, the habitat of whose bacilli I do not know, the ptomaine expends its main fever on those portions of the spine the upper and especially the lower extremities with nerves, as shown by the dreadful suffering in them, hence the synonym "break-bone fever."

If this hypothesis be accepted, will this acceptance carry with it this corollary, that all diseases caused by germs have their consequent ptomaine which cause centric irritation peculiar to themselves? Should scrofula, tuberculosis and phthisis be classed with fevers? I would so class them. They do have their own peculiar centric irritation, which is usually manifested by perversion of nutrition and innervation with more or less disturbance of circulation, and of heat production.

Bacilli produce inflammation, never fever direct, but their ptomaines produce fever. Fever never produces inflammation, though it may favor its production.

Query: Can an inflammation occur save through agency of bacilli?

In conclusion, a word on the principles of treatment with reference to this centric irritation, which constitutes the fever: Select remedies that have power over these centres: in one instance to depress, in another to stimulate, in another to soothe, etc. Herein is seen the source of the power of the ice-bag to the spine: the power of veratrum, physostigma, strychnia, opium, belladonna, aconite, etc, etc. Hence also the power of mental and moral emotions, and many other agencies which directly or indirectly influence the nerve centres.

Gentlemen, I thank you for your attention. I hope you will not permit my theory of the Pathology of Fever to fall still born, but will scrutinize it, and accept or reject it, that the truth and interest of science may be subserved.

Report of Two Tracheotomies for Membranous Croup.

By W. A. CARNES, M. D., Kosciusko, Miss.

I give these cases the name Membranous Croup because of their non-infectiousness. In both cases numerous other children were exposed and none of them contracted the disease. As it was not convenient, or practical, to make microscopic examination of the membrane was made.

Case No. 1 was seen by myself in consultation with Dr. F. K. Mitchell on the morning of Aug. 30th, 1896. He had seen the case three days before for the first time. Examination of the throat revealed a few patches of membrane on each tonsil. There was beginning laryngeal stenosis, temp. 102°. The child was anæmic and had the appearance of suffering with diphtheria.

By 3 o'clock p. m. the difficulty in breathing became so great we saw that tracheotomy was the only chance for recovery that we could offer. The operation was done under complete chloroform anaesthesia, and this is the part that we soon regretted. When the trachea was opened it was found to be lined with membrane. A piece of this about two inches long was removed through the opening and the tube inserted. The patient stopped breathing soon after this. Inversion and artificial respiration was practiced for about two hours. He would breathe very well for a few seconds, then drop asleep and seem to forget to breathe. Strychnia was given hypodermatically. At the end of a couple of hours he began to breathe perfectly, his pulse improved and we began to compliment ourselves, but about twelve o'clock—midnight—his heart began to fail and there was a gradual decline until seven a. m., when death occurred.

Will say that this patient had the clinical symptoms of diphtheria, but the contagion was lacking. There was enlargement of the submaxillary lymphatic glands.

Case No. 2, white female, aet 5 years. The first symptom of illness the parents noticed was some hoarseness and cough, with complaint of sore throat. These symptoms grew worse until there was loss of voice and difficult breathing. I saw the child at the end of the fourth day of its illness—10 o'clock p. m., October 2d, 1898—in consultation with Dr. D. M. Claitor. Respiration was very labored, there being as much difficulty on expiration as inspiration. There was no membrane on tonsils pharynx or soft palate, no glandular involvement, only slight elevation of temperature and child tossing restlessly from side to side. At 5 o'clock a. m. we saw that tracheotomy was absolutely necessary to save life. I had not forgotten my former experience with chloroform. The child was placed in position for tracheotomy, and, as it was very intractable, I gave it a few whiffs of chloroform to obtund sensibility, and, locating the trachea with my left index finger, I opened it, about as I would an abscess. There was no time to lose; venous hemorrhage was free until the obstruction to the breathing was removed when it stopped. It was not necessary to ligate a vessel. As I did not have a tracheal tube with me, I used a cane quill for the purpose—a good-sized rubber tube also answers well for the purpose until the proper instrument is obtained. I secured a tracheal tube fourteen hours after operation. The child was awake by

the time trachea was opened and as soon as this was cleared of blood by coughing, its countenance showed gratitude for the great relief. To counteract the effect of the chloroform on the arterioles 1-100 grain of atrophine sulphate was given hypodermatically. From this time on the child took nourishment and medicine well. There was some leakage of liquids into the larynx on swallowing and the liquids passed out through the opening. This ceased at the end of three weeks. The tube was permanently removed at the end of four weeks. Pieces of membrane were removed from the trachea at the time of operation and some was coughed out the next morning when the tube was removed to be cleansed. After a few day laryngeal respiration became possible but the passage of air was not yet easy, nor did it become so under two weeks. The patient is still under observation and improving. This is what we call membranous croup; no membrane except in larynx, great dyspnoea, but little elevation of temperature, and no constitutional disturbance except that caused by the respiratory difficulty.

A Modern Utopia.

BY HON. W. H. MAYBIN, BILOXI, MISS.

On the southern border of Mississippi, stretching less than an hundred miles, and between New Orleans and Mobile, is a land, that but yestere'en was little known, little dreamed of, by any save those whose life's lot, had been cast thereabouts, and yet for beauty, healthfulness, and all attractiveness, its better is not. Here no summer's scornful scorching nor winter's rude raging runs riot. The summer days are only lazy ones, and from off the gulf comes breezes, bearing the balm of Gilead on their breath, and the winter's day is not one of alpine snows, nor seal-skin cloaks, but rather balmy, and while the crisp morning air is bracing, yet the sun is ever inviting you to come out and bathe in the glory of his golden flood. As I write, I hear the turkey gobbling his lone requiem, for only three days more and his life is sacrificed to the highest place of the Thanksgiving festal board. I am writing by an open window with the balmy breezes playing hide-and-seek with papers on my desk, the sunshine is dancing about on the floor like a drunken elf, and my coat is off, and there is no fire near, unless it be in the Chinese

laundry next door. Just across the way is a rose garden and ever and anon the fragrance of roses and violets steal in, and just for a moment I am a lotus eater.

Here in Biloxi—you know its an Indian name and means broken pot—you can dream away the hours, or loaf them away, in company with some old raconteur, who will regale you with tales of things that were, or you can get in a line and find business energy and push and go as fast as you please, and engage in any sort of business, from driving a carriage to running a bank; and pardon me for digressing a moment to say a word about the Bank of Biloxi. This institution since its organization has proportionately done more business and declared larger dividends than any bank in the United States. Our schools and churches are as good and numerous as any city of our size in the world, our business is done on a safe, conservative basis, our people are good, honest people, we have everything to make us happy and so little to bring misery; but our great attraction is the healthfulness of the country. In the fall of 1897, yellow fever, the disease above all others dreaded by the people of the south and everywhere else for that matter, made its appearance here and for three long months waged and warred in our midst like an insane giant, and death and despair was at every hand, and with the coming of the past summer the anxiety of the people about its recurrence was pitiful, but the natural conditions and the vigilance of the health officials kept it out of Biloxi and off the coast. We didn't have any yellow fever this summer; we are not going to have it any more, for the reason that yellow fever can't hibernate here, and its introduction will not be permitted by the health authorities. The coast is healthy, it is clean from every standpoint, especially from a sanitary point. It's people are whole-souled, brave and generous, it's a good place to live, it's an easy place to make a living. Nobody interferes with your politics or religion. You can loaf and live or you can labor and prosper. If this comes to any descendants of the elder day Thomas, and he, too, doubts, let him come here and see what there is here, and he will not wonder that this a modern Utopia.

“The land to us of every land our pride,
Beloved by us o'er all the world beside.”

The Early Diagnosis of Diphtheria.

BY WILLIAM K. JAKES, M. D., DIRECTOR ANTITOXIN STAFF HEALTH
DEPARTMENT CITY OF CHICAGO.

Outside of laryngeal complications, the mortality in diphtheria is due to the toxin produced by the Klebs-Loeffler bacilli. No physician can successfully treat diphtheria unless he understands the nature of this toxin, how it is produced, and how the cells may be fortified against its destructive action. He must understand that the Klebs-Loeffler bacillus is a distinct living entity or vegetable organism ; that one of the products of its existence is diphtheria toxin, just as the result of the life of the yeast plant in alcohol.

Other germs in anginas will cause inflammation, pain, temperature and membrane, but only the Klebs-Loeffler bacilli produce the deadly toxin which begins with their invasion and progresses to a fatal amount as swiftly as conditions permit.

To appreciate the danger of his patient, a physician must understand the rapidity with which these bacilli multiply under favorable conditions. The clinical symptoms manifesting their residence may give no indication as to the rapidity with which the fatal amount of toxin is being produced. The best means of comprehending this fact is to use the microscope and follow the multiplication of the Klebs-Loeffler bacilli in their cultural life. Inoculate a box of culture-medium with infected mucous and place in an incubator at body temperature. At the end of three hours, a cover-glass pressed upon the surface, properly stained and mounted, will show sufficient bacilli, if they are present, to give an idea of the number and arrangement of germs upon the surface of the medium. Incubate the same culture eight hours, and an examination will show that the germs have multiplied many times. Eighteen hours will reveal a large and complete colonization, from which an idea can be gained of the way in which the Klebs-Loeffler bacilli multiply under favorable conditions. Understanding, as we do, that toxin is a product of these germs, their multiplication means an increased amount of toxin, which soon reaches the fatal point unless checked by the use of antitoxin. This demonstrates the importance of a physician knowing at the earliest possible moment what germs are present in an angina. It may be said that in the majority of cases there are two things he

does not know : the extent of the infected area, and the resisting power of the patient.

The diagnosis of diphtheria in the early stage of the disease must be made from both clinical and bacterial evidence. From his patient the physician finds clinical manifestations of an invasion of the mucous membrane of the respiratory tract. When his microscope reveals the germs that are causing this invasion, he can then say whether or not the disease is diphtheria. Delay in ascertaining this information can only be done at great risk to the patient's life and the doctor's reputation.

In order to ascertain the value of direct diagnosis,---by which we mean the examination of material taken directly from the infected area without waiting for incubation---the Chicago Health Department has introduced the following culture outfit for the use of physicians ; a sterilized swab is placed in a glass tube ; a slide carefully wrapped in paper is placed with this in an envelope together with a culture box and directions for using same. Physicians are requested to inoculate the swab from the inflamed site, spread a little mucus upon the slide and allow it to dry. The culture medium is inoculated from the same swab and it is returned to the glass tube. The whole outfit is then to be sent to the nearest incubator station or laboratory.

As this method has been in use but a short time, its value has as yet to be demonstrated conclusively. From my own experience I have received very valuable information. In one case I did not find any Klebs-Loeffler bacilli in the culture medium but found that a large colony of the bacilli had incubated upon the mucus which was still left upon the swab. In a number of cases I have been able to make a direct diagnosis by staining and examining the slides as soon as they come to the laboratory. When no antiseptic treatment has been administered before the culture is taken, and the disease manifests malignancy, by stupor, hoarseness or swelling of the cervical glands, it has been possible in about 50 per cent. of the cases to find sufficient bacilli to warrant a diagnosis of diphtheria, sometimes before any trace of membrane is visible. When it has been possible to get a small portion of membrane to spread on the slide, there has been no difficulty whatever in about 75 per cent. of the cases in making a direct diagnosis.

Cases in which the Klebs-Loeffler bacilli can not be found by direct examination will lose very little by waiting for incubation of the culture.

A bacteriologist can not be sure that his examination reveals the true condition of a case unless he knows the material was correctly obtained. In a laryngeal case, mucus from the mouth may not have become infected sufficiently to show the bacilli present. This may also be true with an invasion of the cervical glands; but if a piece of membrane is obtained from the tonsils and found not to contain the Klebs-Loeffler bacilli, the probabilities are that it is not diphtheria.

In large cities, where examinations are made by the bacteriologists of health departments, a physician may perhaps be pardoned for not acquainting himself with the technique of examinations. At the same time, the more a physician knows about the bacteriology of diphtheria, the more accurate will be the results from the perfectly taken cultures which he sends to the laboratory. One of the greatest disadvantages we have to labor under is the faulty manner of making cultures by physicians who know nothing of bacteriology. Even if the culture is recognized as imperfect before incubation, it means at least a few hours' delay in securing another.

Because of the contagious nature of diphtheria, the health departments of large cities have been making bacterial examinations for physicians, and the success of the work in controlling and limiting the disease, as well as its statistical value, has justified the expense. As long as there was no specific for diphtheria, the diagnosis was not of such vital importance. Physicians could prescribe local treatment and await developments. Now that we have a remedy which, when properly used, may truly be called a specific, and when the life of the patient depends upon an accurate diagnosis, the responsibility of the attending physician is very great.

In the malignant form of diphtheria nearly 50 per cent. of the cases die unless proper treatment is administered. Any physician who neglects to make a correct diagnosis during the time when the remedy is efficacious—that is during the first two or three days—is responsible for the result. He is responsible because it is within his means to obtain the knowledge which will make him competent to treat the disease intelligently, and therefore successfully. He is also further responsible in permit-

ting the continuance of infection to endanger the safety of the community. The technique of the bacterial diagnosis is simple. The entire outfit for this work may be obtained for less than one hundred dollars. The essentials may be acquired at home by any physician who is willing to devote no more than his leisure moments to it.

The users of antitoxin everywhere emphasize the importance of its early administration. In a paper by Dr. Edwin Rosenthal of Philadelphia, read at the meeting of the American Medical Association in Denver, he gave a statistical record of sixty cases in which he administered antitoxin, with nine deaths. The recoveries are not more instructive than the deaths, in all of which the record shows antitoxin to have been administered from the third to the ninth day. The child who received the antitoxin on the third day died of bronchial pneumonia. The other cases, all being in an advanced stage, illustrate in a forcible manner that antitoxin had not been given until after the destructive action of the toxin, against which no remedy is proof.

To demonstrate the protective value of antitoxin, the following experiment has been conducted: On October 10, in the presence of Dr. F. W. Reilly, assistant health commissioner of Chicago; Dr. Wynekoop, assistant bacteriologist, and myself, Dr. Adolph Gehrmann, city bacteriologist of Chicago, injected nine guinea pigs with four-times-fatal doses of diphtheria toxin. The first three were immunized two days previously by the injection of .1 c.c. each of Parke, Davis & Co.'s antitoxin. The next three received .2 c.c. of the same antitoxin. The third three have had no treatment whatever since the injection of the toxin. The pigs are here, and are correctly labeled as to condition, which presents decided effects on this, the fourth day. All pigs that received antitoxin are alive and apparently well. Of the three not protected, two are dead. The third, being still alive, would indicate the possession of natural immunity against the toxin.

From my connection with the Chicago Health Department, four years ago, to the present time, our efforts have been directed toward obtaining an early diagnosis in all anginas, and supplying a reliable grade of antitoxin. The best methods of work have been studied and established, with a view to assisting physicians by furnishing such facilities for the diagnosis and care of contagious diseases as they might not have themselves. As a result, our department corps of inspectors are doing harmoni-

ous work and our success in controlling diphtheria is demonstrated by the decrease in mortality from 38 per cent., not including laryngeal cases, to 6.7 per cent., including all forms of the disease. During the month of September, the department treated 108 charity cases, 66 of which were bacterially verified as true diphtheria, with three deaths. Two of these cases were in the last stages of toxin poisoning when the inspector was called. It has become possible by improved methods to give a physician a diagnosis within an hour from the time he makes his first call, if a direct examination can be made; if not, he receives his answer in from six to ten hours from the time the specimen is received.

It is fair to assume that our remarkable success in controlling and limiting diphtheria is due to the methods employed, the most important rule of which is, *first and always, secure an early diagnosis, then lose no time in applying the remedy.*—*Journal of the American Medical Association.*

Correspondence.

Postponement of the Third Pan-American Medical Congress.

INTERNATIONAL EXECUTIVE COMMISSION OF THE PAN AMERICAN MEDICAL CONGRESS.

OFFICE OF THE SECRETARY.

CINCINNATI, November 5, 1898.

My Dear Sir: I have the honor to announce that in April, 1898, I received from Dr. Jose Manuel de los Rios, Chairman of the Committee on Organization of the III Pan American Medical Congress, a request that, in consequence of the then existing rebellion in Venezuela, no definite arrangements be made at that time relative to the meeting of the Congress previously appointed to be held in Caracas in December, 1899.

The following communication relative to the same subject is just at hand:

CARACAS, September 25, 1898.

Dr. Charles A. L. Reed, Secretary of the International Executive Commission, Cincinnati, Ohio.

Dear Sir: After having sent my communication dated April last, I find it to be my duty to notify you that, although

the considerations pointed out in it have already ended, our country has been scourged by smallpox which has taken up all our physicians' activities and time, depriving them of going into scientific works. And, as that state of mind of our people and government after such calamities as war and epidemic, would greatly interfere with the good success of our next meeting, I beg leave to tell you, in order you will convey it to the International Executive Committee, that our government and this commission would be grateful to have the meeting which was to take place in Caracas in December, 1899, adjourned for one year later. I am, dear Doctor,

Yours respectfully,

THE PRESIDENT.

[Signed]

DR. JOSE MANUEL DE LOS RIOS.

In accordance with the request of the Government of Venezuela, and of the Committee on Organization, the III Pan American Medical Congress is hereby postponed to meet in Caracas in December, 1900.

For the International Executive Commiseion.

CHARLES A. L. REED, Secretary.

ARCOLA, MISS., October 25, 1898.

There seems to be quite a diversity of opinion as to the healthfulness of the delta counties compared with that of the hill counties of this State. As physicians of the delta, we are very often asked the question, "Do you think the delta section of Mississippi is as healthy as the hill counties of the State?" There is no law in the State, that I know, requiring physicians to record mortuary statistics, consequently no answer can be given with any degree of accuracy.

I have been trying to compare the death rate between the two sections by getting the death rate of the various churches, lodges, life insurance companies and other organizations throughout the State during the past four years.

Last year I presented to the Yazoo Medical Association statistics that I had collected for three years—1894-95 and '96. Since that time have collected for 1897, and will now give what I have for the four years 1894-95-96-97. Found the undertaking little more tedious than I expected, and my report is not as complete as at first thought. Have only been able to get a report from the churches and some of the lodges. Will give the num-

ber of members and number of deaths in each organization for one year 1897.

	DELTA.		HILLS.	
	Members.	Deaths.	Members.	Deaths.
Methodist.....	3462	40	28390	241
Baptist.....	1235	12	7476	65
Episcopal.....	278	20	3568	102
Catholic.....	495	18	2090	33
Masonic Order.....	517	16	8472	187
Odd Fellows.....	104	3	1629	18
Presbyterian.....	254	4	215	4

The average death rate per 1000 for each year during the past four years both in delta and hill counties is—

YEAR.	DELTA.	HILLS.
1894.....	15 per 1000	9 per 1000
1895.....	13 per 1000	16 per 1000
1896.....	17 per 1000	20 per 1000
1897.....	28 per 1000	15 per 1000

Making an average death rate for four years of 18 per 1000 in the delta counties, 15 per 1000 in the hill counties.

I do not think the data as here presented is of extent sufficient to justify an opinion as to the healthfulness of the delta compared with the hill counties of the state but by collecting data each year during the next two or three years I think a very accurate conclusion might be reached showing the actual death rate between the two section. Hope next year to get a report from all the churches and lodges.

NEW ORLEANS POLYCLINIC.—Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, particularly laboratory work. *The twelfth annual session opens November 24th, 1898.* For further information address New Orleans Polyclinic, P. O. Box 797, New Orleans, La.

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Editorial.

H. M. FOLKES, M. D., BILOXI, MISSISSIPPI,

Editor and Business Manager.

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SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

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Now that the smoke of battle has cleared away we may get a correct perspective of the late season's sanitary work so far as yellow fever is concerned.

Owing to the extreme mildness of the winter of '97 it was believed that there would be a recrudescence of fever and the

concensus of opinion among sanitary officers in the South, as expressed at the several quarantine conventions held was that New Orleans was the danger point. This opinion was based upon the records of the past and the known habits of the disease.

Acting on this presumption the Mississippi State Board of Health placed one of its strongest members in the city of New Orleans. Mississippi is an agricultural state and its people fear yellow fever. The legislature of appropriated the sum of \$50,000 for the purpose of protecting its citizens from the scourge. The Board acting in the light of past experience put its officer in New Orleans for the purpose of protecting our state, so on the 4th day of September when Dr. Dunn announced fever in New Orleans a quarantine was promptly put on by our able secretary. This embargo was removed on the 8th, because Dr. Dunn's diagnosis was not sustained by the representation of Alabama nor by the representative of the United States Marine Hospital Service, Surgeon Carter.

Subsequent events demonstrated the absolute correctness of Dr. Dunn's diagnosis; and the abuse to which he was subjected was on a par with some of the other honorable actions of the city of New Orleans.

In August fever was diagnosed and announced by State Inspector Gant at Taylor Station on the line of the I. C. R. R. This was done single handed and alone and was another evidence of the lofty principle and courage ever actuating this toned Christian physician.

Fever was announced in Oxford on September 18th, in Jackson on the 10th. It was then evident that a focus of undiscovered infection existed and to discover this became the prime duty of the Board. Dr. Dunn was ordered to Benoit where a case had developed from the Taylor focus, and Dr. Haralson ordered to New Orleans to discover if possible the point of leakage. He, with the inherent honesty and straightforwardness of the man, went direct to Dr. Souchon, president of the Louisiana Board and told him that it was believed by the Mississippi Board that the fever in the State was coming from New Orleans. This was about September 14th. Surgeon Carter arrived from Franklin, La., where his service had been in charge of the fever at that point since its discovery in August, on the 16th.

Dr. Haralson had in his possession data bearing on the existence of fever in the city and Surgeon Carter secured more.

Thus fortified the Louisiana State board of health was notified that if it did not announce the presence of yellow fever in the city of New Orleans that the Marine Hospital Service would. Thus it was that the case of Mallory Kennedy reported to the city board of health on September 12th, by his father, Dr. T. S. Kennedy, whose diagnosis was concurred in by Professors Reynaud and Parham, became announced to the world on the 17th, five days after it being first reported. The city was at once quarantined and its cowardly, assassinating methods stopped, though too late to prevent a widespread distribution of the disease. The only place becoming infected after putting on the embargo was Waveland, and personally I believe this was infected before September 17th, but I can't prove it, so won't say so.

The contention made by President Souchon that land quarantine is not effective is as weak as anything possible to imagine, coming as it does from a man who quarantined three whole counties for over thirty days because of the existence of fever at a point in the center of one of the counties. He knows that not two places were infected from a *known* focus of infection and the reason the "rigid quarantine of the Mississippi State board of health" was ineffective as to certain points was that it was locking the door after the horse was gone. In 1897 two cases only ever went through the lines of State board quarantine. If he is not familiar with these facts I respectfully refer him to Surgeon Carter who is, and who will take pleasure in nailing a false or misleading statement. I do not care to make war on the health board of a neighboring State. Dr. Souchon and his board and Dr. Kohnke and his board are the official health representatives of a great people and this people will have to abide by the consequences engendered by their representatives.

Just one word more and this disgraceful history will be buried in the archives for future reference should occasion demand. Dr. Souchon calls the disease "Yellowoid" and mentions its extreme mildness. This mildness appeared to have been the case nearly everywhere except at New Orleans, where according to the last report bearing Dr. Souchon's name, that I saw, they had a mortality of 33%. Now this means one of two things, either the disease had a frightful percentage of deaths in the Crescent City or else the number of cases was not reported. Dr. Souchon can select either horn of the dilemma as best suits him-

self. Does he mean to charge his local medical men with being willful liars and violators of the law, or does he stand by his official report and have a good, old-fashioned yellow fever death rate?

YELLOW fever is a preventable disease and can be stamped out in any community where honesty prevails. Vide McHenry, Miss., 1898, Carter and Haralson.

QUARANTINE should be abolished and replaced by the care of our sick by the most approved modern methods.—Souchon, New Orleans quarantined, 1898.

HANCOCK, Harrison and Jackson counties quarantined June 9 to July 12, 1898, by Louisiana State board of health. This was not New Orleans, but Mississippi. The boot was on another foot.

THE national government must protect its integral parts, that is the states, not alone from a foreign invasion, but also from each other. Does any sane man suppose that the health officers of Mississippi could have forced the announcement of yellow fever in New Orleans single-handed and alone? It was the representative of the National Government that they feared and it was his threat, not in so many words possibly, that brought the tardy, leaden-footed truth too late to save us from disaster. We, of the South, demand that the National Health Authorities, be they Marine Hospital Service or a Department of Public Health, place a man in New Orleans to protect us and to tell us the truth. God forbid that we should ever have any more fever. Nor do we pine for quarantines as they are most destructive to business and prosperity, cause widespread suffering among those thrown out of employment, force many a suspension of struggling merchants and engender more animosities than any one man's life should possess.

WITH all due deference to President Souchon, it does seem the height of absurdity for him to be constantly prating about

the Atlanta Convention when he was the first health officer in the South to violate its provisions. His two recent pamphlets on the subject of "Educational Points Concerning Yellow Fever" and "Quarantines" are full of fine thoughts and some really good things but their whole beauty and usefulness is marred by a little thought which will creep in as to the value of a certain essential in the foundations of all such buildings, and its name is *truth*. If there is any doubt about this, I respectfully refer to Surgeon H. R. Carter, United States Marine Hospital Service.

"UNDER Dr. Wood's orders the city was rapidly placed in a sanitary condition with a proportionate decrease in the mortality from disease, and, within a short time afterward, the city of Santiago was wholly free from yellow fever."—*Memphis Medical Monthly*.

The above statement is inaccurate and misleading. Sanitation is absolutely imperative and should be forever encouraged and pushed, but in the present instance its results are overestimated, for yellow fever continues to prevail in Santiago, the official reports to the contrary notwithstanding. This statement is made on no less an authority than the second in command of the fever hospital at that place, and who assures me that the reports are incorrect. I refer to Dr. Tackett, who has lately returned from Santiago.

THE Journal is the property of the Mississippi State Medical Association and as such should be a source of pride to every member of the Association. Since the departure of Dr. Tackett in June every issue has been in my hands. We have not missed a single issue, and, when it is remembered that the acting editor is an attache of the State Board of Health, it should be readily seen that his hands have been full. His duties have been so immediate that at times we have been much delayed in getting the Journal out. Now, for all these faults and any lack of thoroughness, we apologize. That is settled; and we now come with a few words to the profession in the State and earnestly request you to aid us in building the Journal up to a high state of excellence. Our profession numbers about 2500 members in this State and surely we have as good material as can be found in any similar number in any other State. So it is to you that I have come and ask you to take an interest in our work. Write

us an article on some timely topic among us. Feel that the Journal is partly yours. Remember that the editor is just as much in need of something good to handle as if the paper was published in New York or Philadelphia or Chicago. Do not go out of the confines of your own State to give to outside magazines articles on daily experiences which are many of them as full of sound good sense and judgment as may be heard in the lecture rooms of the seats of learning. Since taking the helm I have associated with me in handling the various departments of the Journal, several well known members of the profession throughout the State. This has been done with a view towards making the publication more thorough in that it affords more time to any one branch than is at the disposal of one man. However, I want every member of the profession in the State to constitute himself a collaborator and lend us his interest and influence towards making ours a first-class, ethical and successful publication. In closing I would like to say that we are not begging. The Journal is self-sustaining through its subscribers and advertisers. As nothing succeeds like success, we wish to become more and more successful.

DR. CONNER of the Presidential Investigating Committee recently asked one of the witnesses if it were not a fact that members of the Army Medical Corps did not begin to deteriorate from the moment they entered the service. This was really a very pertinent question and one demanding a careful answer, because when we stop to consider, the army doctor has very little chance for a display of anything except the most routine knowledge and exercise of red tape. As a rule they are young men when they enter the service and their practice is confined to a number of men in a garrison year in and out. Within this narrow circle moves the even tenor of their way. As a rule garrisons are in healthy places, so practice is limited to sexual and skin complaints, with a little malaria and bowel troubles, etc., thrown in for good measure. Some of them keep fully abreast of the times and one and all of them are fully able to take proper steps towards running the clerical and strategical part of army equipment, be it for corp, division, brigade, or etc. When all the fuss and furor about shameful neglect, etc., on the part of the doctors is over it will probably be found that the doctors did their duty to the best of their ability as doctors, and that

blame for unpreparedness and lack of judgment will have to be divided with the generals and colonels commanding. It is a great pity that sufficient authority is not placed in the hands of the chief surgeons of army corps to enforce such sanitation as may in their judgment be required, whether the commanding general approves or not.

MUCH has been said about the inhumanity and neglect of the doctors towards the soldiers. Some few instances of this kind have doubtless occurred, but it is a well known fact that men when congregated together away from home are apt to become captious and will tell all kinds of lies to those to whom they may happen to write. An instance of this kind came under my personal observation in Central America, in which a poor devil had been killed by another fellow in a drunken brawl and in his pocket was found a letter to a relative stating that the men were dying at the rate of five a day, when the truth was that twelve were lost in eighteen months. This will do as a sample of some of the tales told.

UNDER the head of Public Health we publish a recent decision of the courts bearing on the rights and powers of the State Board of Health. This decision is of most far-reaching import as it settles beyond all controversy the fact that the board has ample power to make such rules and regulations as to completely overshadow efforts on the part of individuals, towns or cities to interfere with properly directed efforts of the Board to stamp out disease.

AMONG the original articles is one from the versatile and classic pen of Hon. W. H. Maybin, on the Gulf Coast of Mississippi. He nicely points out the beauties of the coast, and points with pride and gratification to the fact that we escaped a visitation of yellow fever this season just past. It is indeed a fact that, with the exception of the seventeen cases at Waveland, we did miss the fever, even though it had been in New Orleans for weeks preceding, and this was the most exposed part of the state.

THE Journal will continue under the editorial management of Dr. Folkes. Dr. Tackett will act as one of the collaborators of the Journal and it is trusted that success will continue to crown our efforts.

Public Health.

AN IMPORTANT DECISION.—At a recent term of the circuit court of Harrison County, Mississippi, held at Mississippi City, beginning on the 14th of November of the current year, a most important decision was rendered in the case of *The City of Biloxi vs. Dr. H. M. Folkes*, charged with violating a city quarantine ordinance. The facts of the case were as follows: Dr. Folkes was and is the representative of the State Board of Health, and his headquarters are Biloxi. Yellow fever was suspected to be prevalent at McHenry, Miss. Dr. Folkes went to McHenry to investigate and determine the nature of the disease, and, with Dr. Haralson, reported the infection to be yellow fever. In the meantime the City of Biloxi had quarantined against McHenry. Dr. Folkes, having finished his investigation, returned to Biloxi, after having taken the proper precautions, as to personal disinfection. Upon this, he was arrested and tried and convicted of violating the ordinance of the City of Biloxi in reference to quarantine. An appeal was prosecuted to the circuit court, where the court, Hon. T. A. Wood, held that the following section of the Act of 1898, in reference to the powers of the State Board of Health, left the control of egress and ingress out of and into places, both infected and non-infected, within the discretion of the properly accredited representative of the Board of Health, and that to put any other construction upon the law would be to render it invalid and inoperative, and to render the Board of Health of the State, and its representatives powerless:

Sec. 6. It shall be the duty of the Secretary of the State Board of Health, upon the receipt of information that there is any case of yellow fever, cholera, dengue, small-pox or other virulent epidemic contagious diseases in any portion of this State, to order the proper county health officer or other competent physician to proceed immediately to said place and to investigate the said reported case or cases of yellow fever, cholera, dengue, small-pox or other virulent epidemic contagious disease, and to report to the said Secretary of the State Board of Health the results of his said investigation, and said Secretary of the State Board of Health shall at once declare any infected point to be in quarantine under a competent physician as State

Health Officer, and shall notify the president of the State Board of Health, who shall, if practicable, call a meeting of the State Board of Health for the consideration of the same. Said State Health Officer shall have power, and it shall be his duty, in accordance with the quarantine regulations of the State Board of Health, to place any and all such restrictions upon ingress and egress at an infected point as may be necessary to prevent a spread of the disease from the infected locality, and to so control the population of said infected point, as to the disposition of the same, as shall best protect that population and at the same time prevent a spread of the infection among the same.

Dr. Folkes was discharged, the court holding that he had not violated the city ordinance. Hon. J. H. Neville represented the City of Biloxi, and Hon. W. H. Maybin represented Dr. Folkes.

* * *

The following were the resolutions adopted at the recent quarantine convention held at Memphis :

That for the purpose of protecting and improving the general health of the people of the United States, co-ordinating and harmonizing the action of the State and National sanitary authorities ; framing regulations for the treatment of infected vessels and material at all infected or suspected foreign ports of shipments ; preventing unnecessary interference with commerce ; the United States mail ; or through traffic by land or water ; and for adopting a uniform system of quarantine for all ports in this country, be it

Resolved, That there be established on a broad and comprehensive basis a National Bureau of Public Health in the Department of the Treasury of the United States. That the administration of all the public health functions now exercised by authority of the United States be placed in the charge of this Bureau.

Resolved, 2d, That the sanitary authorities and commercial interests of the several States of the Union be brought into immediate relations with the Bureau, and be given a due share in the power and responsibilities of the Central Board through the agency of an Advisory Council consisting of one member from each State, to be appointed by the authorities of the several States.

OFFICE OF MISSISSIPPI STATE BOARD OF HEALTH,
Jackson, Miss., Nov. 8, 1898.

The following is a list of yellow fever cases and deaths reported at the State Board of Health office to date :

Name.	Date of First Report.	Cases.	Deaths.	Date of Last Report.
McHenry.....	June 9	26	none	June 29.
Eucutta.....	June 12	1	none
Taylors.....	Aug. 9	116	13	Oct. 23.
Orwood.....	Aug. 9	99	8	Oct. 26.
Waterford.....	Sept. 2	2	none	Sept. 15.
Jackson.....	Sept. 10	239	13	Nov. 5.
Oxford.....	Sept. 18	74	12	Oct. 11.
Edwards & ve'ty	Sept. 26	19	1	Oct. 18.
Water Valley	Sept. 28	13	none	Oct. 21.
Harriston.....	Oct. 1	135	9	Oct. 30.
*Fayette.....	Oct. 3	7	none	Oct. 9.
Madison.....	Oct. 3	116	3	Oct. 31.
Port Gibson.....	Oct. 3	1	1
Woodville.....	Oct. 3	1
Clinton.....	Oct. 4	1
Starkeville.....	Oct. 5	9	none	Oct. 18.
†Hermanville.....	Oct. 6	4	none	Oct. 17.
Natchez.....	Oct. 6	38	4	Oct. 2.
Ridgeland.....	Oct. 8	7	none	Oct. 16.
Lumberton.....	Oct. 9	24	1	Oct. 27.
‡Hattiesburg.....	Oct. 9	37	4	Oct. 21.
Poplarville.....	Oct. 9	38	1	Oct. 28.
Canton.....	Oct. 10	14	none	Oct. 26.
Woodland.....	Oct. 10	17	1	Oct. 18.
§Crystal Springs	Oct. 11	8	none	Oct. 21.
Tougaloo.....	Oct. 16	3	none	Oct. 22.
Yazoo City.....	Oct. 17	26	2	Nov. 3.
Meridian.....	Oct. 17	3	none
McRaven.....	Oct. 23	3	none
Total.....		1080	74	

*This record is incomplete.

†These cases were three miles in the country.

‡Report by letter of Nov. 4. Eighty cases and seven deaths since Oct. 1.

§Report by letter. Fourteen cases since Aug. 38, all some distance from the town.

Abstracts and Extracts.

HEREDITY IN RELATION TO MENTAL DISEASE.—

Farquharson, from a study of 1,200 cases of hereditary insanity, comes to the following conclusions (Boston Medical and Surgical Journal, Nov. J, 1898):

1. Authorities vary greatly in the estimates they give of the frequency of hereditary predisposition in cases of insanity. In the Cumberland and Westmoreland Asylum 30.7 per cent. of all the cases admitted showed a history of previous insanity in their families.
2. A history of insanity in relatives, whether in the direct line or collateral, may be deemed sufficient evidence of hereditary predisposition. It is not actual insanity that is transmitted, but an inherited flaw in the nervous organization. This may remain latent for one or more generations, and subsequently reappear.
3. Hereditary predisposition to insanity is strongest when it is inherited through both parents.
4. The maternal influence is very slightly more potent than the paternal in transmitting the tendency to insanity.
5. Insanity inherited through the father is slightly more dangerous to the sons than to the daughters; insanity inherited through the mother is markedly more dangerous to the daughters than to the sons.
6. The female sex is markedly more liable to suffer from hereditary insanity than is the male.
7. The order of sequence of the different forms of mental disease amongst the cases admitted into Garlands Asylum, as regards the frequency of hereditary predisposition which they exhibit, has been as follows: 1. Congenital imbecility. 2. Melancholia. 3. Mania. 4. Epileptic insanity. 5. Dementia. 6. General paralysis. 8. The suicidal impulse is very frequently present in cases of hereditary insanity.
9. Suicide and disomania have a marked tendency to be transmitted unchanged from one generation to another.
10. In most cases, however, the form of insanity in the descendants shows great variations from that which occurred in the ancestors, and different members of the same family or generation may exhibit widely different varieties of mental disease or other nervous disorder. Insanity, the tendency to which is inherited, may have been preceded in the family not by actual insanity, but by other forms of nervous disease.
11. In successive gen-

erations the propensity to mental disease may become gradually intensified; finally a state of amentia is produced, with a tendency to bring about extinction of the family. On the other hand, the tendency to mental disease may become gradually eliminated in the course of generations. 12. The origin of hereditary neuroses in a family can some times be traced to alcoholic excess in the ancestors. 13. Hereditary predisposition to insanity in a family is frequently associated with the tubercular diathesis. 14. The exciting causes of attacks of insanity seem on the whole to be of much the same nature in the hereditarily predisposed as in those without predisposition. 15. Hereditary insanity is specially prone to show itself at critical periods of life; thus puerperal insanity is proportionately more frequent in the hereditarily predisposed than in those without predisposition. 16. Relapses are more frequent in cases of hereditary insanity than in non-hereditary cases. 17. Hereditary cases are apt to suffer somewhat earlier in life than non-hereditary cases. 18. Attacks of hereditary insanity may come on at any period of life. Even in senile insanity the proportion of hereditary cases does not fall very far short of the proportion existing in cases at all ages combined. 19. Hereditary insanity frequently makes its appearance at about the same period of life in successive generations. When the taint is becoming intensified it tends to make its appearance at an earlier age in each succeeding generation; and, conversely, when the taint is becoming eliminated it tends to appear later in life in each succeeding generation. 20. The proportion of unmarried persons is considerably higher amongst those suffering from hereditary insanity than amongst those without predisposition. 21. The recovery rate in hereditary cases of insanity is considerably higher than in non-hereditary cases. 22. The death-rate is lower in hereditary than in non-hereditary cases. 23. The duration of life is somewhat shorter in those suffering from hereditary insanity than it is in the insane generally. 24. A large proportion of deaths from tubercular diseases occurs in cases of hereditary insanity than in non-hereditary cases. 25. The duration of the attack in hereditary cases that recover does not seem to differ very much from that in non-hereditary cases.—*Charlotte Medical Journal*.

Medical News and Miscellany.

Dr. C. A. Sheely, formerly an Acting Assistant Surgeon of the Marine Hospital Service, has located in Gulfport for the practice of his profession. It is needless to commend the doctor by word of mouth, as his sterling qualities so quickly show for themselves that he will lose no time in getting a good practice.

Col. Geo. Waring is one of the latest victims to yellow fever. His death is really a National calamity as he was one of those men peculiarly well qualified to deal with the sanitation of a city like Havana, and it was the intention of the Government to so utilize him. While not a doctor, he had been running with them so long and was so identified with the modern doctor's best work—preventive medicine—that the profession view his loss as that of a brother member.

Now, that the fever is over, those medical men who have so freely given their time and attention to the care of the sick and afflicted will return to their homes to enjoy that peace of mind which is due every man who has dealings with sanitation. Drs. Purnell, Birchett and Waldeur to Vicksburg, Dr. Anderson to Port Gibson, Dr. Rohmer to Bay St. Louis, Dr. Dunn to Greenville, and Dr. Haralson to Vicksburg, which place he will make his home. To the good people of Vicksburg, we commend this faithful, conscientious physician, whose fortune it has been to be a great loser by an honest performance of his duty. We feel sure that his sterling worth and ability as a sure enough good doctor will endear him to the people among whom he newly casts his lot.

"The Gulf Coast Medical Society" effected formal organization in Scranton on the 10th of November by electing Dr. J. K. McLeod of Moss Point as President, Dr. J. J. Washington of Pass Christian, 1st Vice-President, Dr. R. J. Turner of Bay St. Louis, 2d Vice-President, and Dr. O. L. Bailey of Ocean Springs as Secretary. There were present Drs. McLeod, Chamberlain and Thompson of Moss Point, Drs. Duke, Kell, Cox and Bedingfield of Scranton, Dr. Washington of Pass Christian, Dr. Harry of Mississippi City, Dr. Newcome of Ocean Springs, and Drs. Bolton and Folkes of Biloxi. Drs. Duke, Harry, Newcome and Bailey were appointed a committee to draft Constitution and By-Laws, and were to report at next meeting which is to be held in Scranton on November 25. Drs. Duke and Newcome offered the following resolution which was adopted: "*Resolved*, That it is the sense of this society that we should have a National quarantine system under a Department of Public

Health as approved by American Medical Association. The organization of which department we strongly urge. In administration of its provisions we endorse the employment of local physicians always." Drs. Duke and Bailey were appointed to go to the Memphis Quarantine Convention to urge adoption of the above resolution by that body. A resolution inviting the medical societies of Mobile and New Orleans to attend the meetings was adopted, as also was one directing the Secretary to extend invitation to all physicians in the three coast counties to become members. After extending a vote of thanks to the Pascagoula Commercial Club for use of their hall, the society adjourned to the 25th inst.

Dr. J. R. Tackett has returned from Cuba and will make his home in Meridian. It is not necessary to introduce the gentleman to the good people of that town as his memory lingers from the long ago. Dr. Tackett is one of those men who always leave a host of friends behind in any place where he may have for the moment alighted. Down here on the coast it was earnestly hoped that he would stay among us, but as long as he has cast his lot among our brethren in the upper part of the State we wish him that same degree of success which he so richly deserves. We beg to tell him that if ever he wishes to return we will keep a warm welcome awaiting him. The army officials were more than anxious to keep in the service, but his thoughts were for old Mississippi and her troubles, so he offered his services to the State Board of Health, in fighting the fever, but arrived too late to get into the work. To the people of Meridian, we commend him as being a perfect type of gentleman and physician.

SANMETTO IN URETHRITIS, CYSTITIS, PROSTATIC ENLARGEMENT AND ENURESIS.—I gladly write my opinion of Sanmetto. For two years it has given results which are perfectly satisfactory. Have had equal success with it in urethritis, cystitis and prostatic enlargement and phenomenal success when using it for incontinence of urine, both in children and old people. If in medicines we have specifics, then Sanmetto I regard as one in enuresis.

C. M. HARRIS, M. D., Bourbon, Ind.

THE ONLY ONE.—"I am glad to be able to give you the following testimony regarding a patient who has been an invalid for many years, and has had great trouble with her diet, I think due to a sub-acute inflammation of the mucous membrane of the stomach and bowels. For months at a time she has been unable to take a particle of starchy food, and naturally a number of the prepared foods have been tried and different ones have seemed for a time to agree with her, but IMPERIAL GRANUM is the only one she can always rely on, often using it exclusively as a diet for weeks at a time. In one or two instances we feel that it has almost saved her life."

There need be no real necessity for the discontinuance of the use of Cod-Liver Oil (because of failure to obtain results from Plain Oil or some Emulsion) for the undoubted therapeutic value of Cod-Liver Oil but emphasizes the necessity of its scientific exhibition to insure satisfactory result from its employment. The cause of failure in its administration is not obscure: few patients can take Plain Oil owing to its repugnant taste and the difficulty of assimilating it. The province of an Emulsion being to disguise the taste, and to exhibit a definite volume of chemically unchanged oil in condition for easy absorption, it follows that this will be defeated unless the oil is thoroughly emulsified and in combination with agents that will not saponify it, as saponification renders it valueless and even harmful. In emulsions with the alkaline hypophosphites of lime and soda the association of the oil with such agents entirely changes the character of the oil and produces a liquid soap. While less repugnant to the taste than plain oil, medicinal value of such a preparation is greatly diminished, and it is because of this that many a disgusted practitioner has abandoned using Cod-Liver Oil in any form. Admitting a preparation of Cod-Liver Oil with Hypophosphites of Lime and Soda to be unscientific because productive of chemical alteration in the oil, it follows that a combination of oil with the *Phosphate Salts*, giving positive acid reaction and thus precluding saponification, would seem to be based on sound therapeutic reasoning; furthermore, if such an Emulsion exhibits a large percentage of chemically unchanged oil in minute, microscopic sub-division closely analogous to milk (Nature's Emulsion) it must be preferred to plain oil as well as to Alkaline Emulsion, because of the difficulty and failure already referred to attending their administration. Phillips' Emulsion positively exhibits the important advantage noted, the oil is emulsified with Pancreatine, and because of its scientific preparation it has for many years enjoyed an extensive professional support. A more concise statement of its claims for professional recognition will be found in our advertising columns, and we say with all candor that it is an ethical preparation, ethically introduced and maintained.

IN LARYNGEAL OR WINTER COUGHS.—Dr. Walter M. Fleming (*Journal of Nervous and Mental Disease*) says that in acute attacks of laryngeal or winter cough, tickling and irritability of larynx, Antikamnia and Codeine Tablets are exceedingly trustworthy. If the irritation or spasm prevails at night the patient should take a five gr. tablet, containing $4\frac{3}{4}$ gr. Antikamnia and $\frac{1}{4}$ gr. Sulphate Codeine, an hour before retiring and it hourly until the irritation is allayed. Allow the tablet to dissolve slowly in the mouth swallowing the saliva. After taking the second or third tablet the cough is usually under control, at least for that paroxysm and for the night. Should the irritation prevail in the morning or at midday, the same course of administration should be observed until subdued.—*The New York Medical Journal*.

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The Journal

.....of the.....

Mississippi State Medical Association.

VOL. II.

JANUARY, 1899.

No. 10

Original Articles.

Tuberculosis of the Mammary Gland and of the Milk.

TRANSLATED FROM STRAUS' TUBERCULOSIS AND ITS BACILLUS.—BY W. A. EVANS, M. D., 103 STATE ST., CHICAGO, ILL.

Tuberculosis of the breast develops sometimes in the course of a general chronic tuberculosis; sometimes it appears to be the primary lesion. It commences generally by a diffuse infiltration that is uniform throughout certain portions of the gland. The earliest seat is the posterior one-quarter. The gland at this moment contains a large number of bacilli. On section, one finds disseminated in the glandular elements points and yellow lines sometimes hemorrhagic; later these granulations augment in volume and become confluent, soften or calcify. At the same time, the glandular tissue surrounding is compressed by an interstitial growth of fibrous tissue. These fibrous masses imprisoning caseo-calcareous foyers can undergo a considerable development. They sometimes weigh forty pounds. The breast is then irregular in consistency and in outline. The larger milk ducts contain masses that are caseous, yellowish and rich in bacilli. Their walls are thick and infiltrated with milinary tubercles. The lymphatic glands situated behind the infected area are swollen, indurated or caseated. The milk remains normal for a long time; later, when the swelling becomes greater, it becomes serous, yellow and contains flocculent coagula which enclose bacilli. It contains bacilli in the stages less advanced and the

mammary gland appears absolutely normal. When the mammary tuberculosis is more advanced, the milk becomes purulent.

The veterinary inspector in the stock yards at Villette made an examination of the cows for me with a view to mammary tuberculosis. Of fifty cows condemned on account of general tuberculosis, six showed tuberculosis of the udder visible to the naked eye. Of these four had tubercular lesions in all parts of the gland, two had tubercular lesions in one-quarter only. The supra-mammary glands were tubercular in all six. With ten other cows, all profoundly tubercular, the supra-mammary glands were tubercular, but it was not possible to find tuberculosis with the naked eye in the mammary gland.

After considerable space devoted to the consideration of tuberculosis spread through milk, the following is the summary :

Milk coming from tubercular cows is nearly certain to be tubercular when the mammary gland is involved. When the mammary gland is not involved, the milk is generally inoffensive, even if the tuberculosis is advanced and generalized. However, there are a certain number of cases where the milk is virulent, the mammary gland remaining healthy. According to Nocard in the cases where the suspected gland has not appeared tubercular, it is probable that the lesions have been present, but so small or inconspicuous as to have escaped the examiner. He calls attention to the difficulty of finding miliary tubercles in a gland like the mammary gland, having a bunched arrangement.

Let us recall also that in proving the infectiousness of milk, recourse has been had to hypodermic injections, a method of infection that is much more certain than the drinking of milk. In experimentation with the centrifuge by Bang, the following facts were ascertained : The machine was run at 60,000 revolutions for one hour's time. In the layer of sediment at the bottom he found tubercle bacilli very abundant ; in the cream and in the milk less abundant.

Scheurlen has made analogous experiments with artificial mixtures of milk and tubercle bacilli. He determined that many of the bacilli were thrown out by the centrifuge, but a small number remained in the milk and cream. The use of the centrifuge does not offer a complete guarantee against tubercular infection from the milk.

Gasperini has mixed milk with a culture of tubercle bacillus grown on blood serum. He let the cream rise, and in this cream

he found tubercle bacilli. From this he made butter. Some of this butter was inoculated into the peritoneal cavity of guinea pigs. These developed tuberculosis. Other portions of the butter were kept 120 days, until it had become distinctly rancid, when it was injected into the peritoneal cavity of an animal. These animals developed tuberculosis.

There is danger from cheese as well. In some of the methods of manufacturing cheese the milk is heated, but the heating is not sufficient to kill all of the tubercle bacilli. Bang determined that if milk containing tubercle bacilli be heated to 70 deg. C. (158 deg. F.) for five minutes did not kill tubercle bacilli. However, the organisms were markedly enfeebled, and they usually failed to produce tuberculosis in animals to whom this milk was fed in large quantities.

Straus agrees with Nocard that the danger of tubercular infection from butter and cheese is very small.

Report of Tests Made in Louisiana in the Use of Professor Sanarelli's Serum Antiamarylic as a Curative Agent in Yellow Fever.

Sir: Under your instructions of September 26, 1898, to proceed to New Orleans, La., to endeavor to obtain cases of yellow fever in which to use the serum, I called upon the authorities of the Charity Hospital on October 1 and upon those in charge of Touro Infirmary in that city, and made known to them your earnest desire to have granted us the privilege of visiting cases of this disease in those institutions and of using the serum in those we thought suitable, this to be done only in consultation with the attending physician.

Prof. Ernest Lewis, vice-president of the board of regents of the Charity Hospital, after consultation with the superintendent of the institution, informed me that it was thought best to refuse your request on the ground that a test of the same serum, presented to the institution by Professor Sanarelli, was then in process, and that the limited number of cases in hospital scarcely furnished material for this test.

The authorities at the Touro Infirmary, especially Dr. Loeber, promised every facility for the use of the serum, manifesting a lively interest in the subject. At the same time they informed me that a definitely marked case of yellow fever was

very rare in their hospital; that the prevailing type was so poorly marked, so slightly developed, that often it was found necessary to rely upon the fact of the presence of the disease in the community for a diagnosis. All such cases were treated very tentatively, scarcely any medicine being demanded; and in these it was thought there could be no definite results gained from serum exhibition, since they invariably recovered. Such were the cases then on hand. But I was promised instant notification of any admission of a serious type, and preparation was made to respond to such calls.

Consultation with Surgeon Carter, senior surgeon at New Orleans, on October 8, no suitable cases having been admitted to the Touro Infirmaay, decided me to seek at Wilson, La., then generally infected, cases in which to test the prophylactic influence of the serum, and I proceeded there on that date. In this village of some 600 people I found the majority of the population sick or convalescent from a very mild type of fever, so much so that there seemed but little evidence of alarm. Through the courtesy of Acting Assistant Surgeon Bland, U. S. M. H. S., I saw a number of these cases, and he and other local physicians soon acquainted the people with the object of my visit. There was evidence of an indisposition to be "experimented" upon and many declined "the South American treatment." Of those who had been exposed, and who would probably develop the disease, there were three or four who expressed a disposition to submit to the prophylaxis, but they invariably asked for a guarantee, and when this could not be given they hesitated between the unknown remedy and the light type of the disease.

However, two cases of tolerably well-developed yellow fever were found willing to receive the serum treatment, and these are detailed below. In the second case the use of serum was followed by such annoying urticarious erythema, especially after the second injection, that the apprehensions of the family were aroused, and the fact of the new treatment having produced symptoms not seen in any other cases, and of so serious an appearance, immediately became the subject of general comment, and I quickly found the serum relieved of all sympathy, and invested with unknown possibilities for harm. I could get no consent to its prophylactic use.

At this time advice from Surgeon Carter directed me to Baton Rouge, La., where fever was then very rapidly spreading,

and by invitation of Dr. C. McRea, I visited that city on October 12, meeting and discussing with a large number of the physicians the probability of being able to use the serum. There was an expression of the liveliest interest in the subject and a disposition to render me aid, but a general conviction that they were scarcely warranted in advising the use of serum in view of the very simple nature of the prevailing disease. In those cases developing more serious symptoms it was not deemed best to rely upon the serum. Hoping that cases might have occurred in the Touro Infirmary at New Orleans I returned to that city, and although there had been and were none suitable in that institution, I had the opportunity to see one at the United States Marine Hospital under the care of Dr. Faget. This is detailed below:

Case No. 1: Robert Anderson; aged 50 years; a vigorous man, was taken sick at 10 p. m., October 8, 1898, with intense pain in back and limbs and a severe rigor, followed by high fever. When seen at 4 p. m. of the 9th, in consultation with Dr. Bland, the typical facies, pains and commencing icterus left no doubt that he had succumbed to the infection to which he had been freely exposed. Thus far only a mild mercurial had been prescribed, and with his consent the anti-malarial serum was used. At 6:15 p. m., 10 c. c. of serum were injected into the connective tissues of the loin, pulse 84, temperature 38.7 deg. C.; much congestion of vessels of skin of face. Temperature to be taken every two hours as nearly as practicable.

At 9 p. m., temperature 39 deg., pulse 86, more marked flushing of the face and some sweating; at 11 p. m., temperature 38.8 deg., pulse 84, semi-delirious and perspiring very freely, urine free; at 1 a. m., October 10, temperature 38.6 deg., pulse 81, sleeping; at 3 a. m., temperature 38.4 deg., pulse 78, quiet; at 6 a. m., temperature 38.1 deg., pulse 76, urine free; at 8 a. m., temperature 37.8 deg., pulse 66, urine free; at 9 a. m., 10 c. c. of serum were injected into the connective tissue of loin; at 10 a. m., temperature 37.6 deg., pulse 70, congestion of face; at 3:40 p. m., temperature 38.3 deg., pulse 78, sweating profusely; at 5:45 p. m., temperature 38.5 deg., pulse 78, urine free; at 7 p. m., temperature 38.6 deg., pulse 78; at 9:30 p. m., temperature 38.5 deg., pulse 74, restless; at 11 p. m., temperature 38.5 deg., pulse 72, slept one and one-half hours; at 1 a. m., October 11, temperature 38.3 deg., pulse 74, urine free; at 3 a. m., tempera-

ture 38.3 deg., pulse 73, sleeping; at 5:20 a. m., temperature 38.6 deg., pulse 75, feeling weak; at 7:10 a. m., temperature 37.8 deg., pulse 70; at 9 a. m., temperature 37.7 deg., pulse 68, injected serum 8 c. c.; at 7 p. m., temperature 38.4 deg., pulse 78, urine free; at 10:15 p. m., temperature 38.2 deg., pulse 76, refused nourishment; 3 a. m., October 12, temperature 38.1 deg., pulse 76, at 6 a. m., temperature 38.1 deg., pulse 72, slept well; at 8 a. m., temperature 37.8 deg., pulse 75, urine free; at 5 p. m., temperature 38 deg., pulse 70; at 9 p. m., temperature 37.6 deg., pulse 68, bowels free; at 1 a. m., October 13, temperature 37.4 deg., pulse 68, urine free; at 6 a. m., temperature 37.2 deg., pulse 62, takes food; at 6 p. m., temperature 37.3 deg., pulse 62, well; at 7 a. m., October 14, temperature 37 deg., pulse 64; at 6 p. m., temperature 37 deg., pulse 68, discharged.

Case No. 2: Fred. A., aged 19; a healthy young man, son of preceding patient, and much exposed to the infection, was taken sick at 6 p. m. of October 9, 1898, with a hard chill; pain in back and limbs, intense headache and nausea. He received a mustard bath and a mercurial with phenacetine. Temperature ranged from 38.5 deg., to 39.5 deg., pulse 115.

At 9 a. m., 10th, he was given 12 c. c. of serum under the skin; temperature 39.3 deg., pulse 110; at 10 a. m., temperature 39.6 deg., pulse 110, and there was marked congestion of face, lips, ears and body; at 12 m., temperature 39.6 deg., pulse 110; at 3:40 p. m., temperature 39.6 deg., pulse 110; at 6 p. m., temperature 39.2 deg., pulse 114, perspiring; at 8 p. m., temperature 39 deg., pulse 96; at 11 p. m., temperature 38.9 deg., pulse 98, slept well; at 1 a. m., October 11, temperature 38.7 deg., pulse 96; at 3 a. m., temperature 38.5 deg., pulse 88; at 5 a. m., temperature 38.9 deg., pulse 98.

Complains of much dizziness; at 8:30 a. m. gave another 12 c. c. of serum under the skin, temperature 38 deg., pulse 100; at 9:30, temperature 39.3 deg., pulse 100; at this hour the congestion of the face was extreme, and there was marked erythema; at 12 m., temperature 39.5 deg., pulse 105, perspiring and ptyalism; at 4:30 we were hastily summoned, and found the patient suffering extremely from the urticarious rash, face puffed and congested, temperature 40 deg., pulse 110, urine abundant, copious saliva; at 6 p. m., temperature 39.6 deg., pulse 110, phenacetin given; at 8 p. m., temperature 38.8 deg., pulse 102, nausea; at 10 p. m., temperature 39 deg., pulse 104, and vomit-

ing; at 12 m., temperature 39.6 deg., pulse, rash disappearing; at 2 a. m., October 12, temperature 39.3 deg., pulse 105, urine scant; at 4:30 a. m., temperature 39.3 deg., pulse 105, slept well; at 6 a. m., temperature 39.3 deg., pulse 110; at 9 a. m., temperature 39.3 deg., pulse 97, perspiring; at 11 a. m., temperature 39.4 deg., pulse 110; at 1:30 p. m., temperature 38.8 deg., pulse 106; at 5:30 p. m., temperature 39.4 deg., pulse 90, urine scant; at 7 p. m., temperature 39.3, pulse 98; at 9 p. m., temperature 39.4 deg., pulse 98; at 12:30 a. m. October 13, temperature 38.3 deg., pulse 88; at 4 a. m. temperature 38.1, pulse 81, slept well; at 6 a. m., temperature 38.4 deg., pulse 86; at 8 a. m., temperature 38.5 deg., pulse 83; at 10 a. m., temperature 38.8 deg., pulse 82; at 12 m., temperature 38.8 deg., pulse 85; at 2:30 p. m., temperature 38.8 deg., pulse 82; at 6 p. m., temperature 38.7 deg., pulse 83; at 8 p. m., temperature 38.4 deg., pulse 82, nauseated; at 12 m., temperature 37.8 deg., pulse 78; at 4:30 a. m., October 14, temperature 37.6 deg., pulse 77; at 7 a. m., temperature 37.5 deg., pulse 76; at 9 a. m., temperature 37.5 deg., pulse 77; at 6 p. m., temperature 37.7 deg., pulse 80; at 10 p. m., October 15, temperature 37.2 deg., pulse 78, discharged.

Case No. 3: A. B., seaman, about 35 years of age, was admitted to the isolation ward at the United States Marine Hospital at New Orleans October 13, 1898, and when seen in consultation with Dr. Faget was moribund from almost fatal suppression of urine. He was unconscious; there was hiccough, and jactitation, small weak pulse, devoid of tone. In the hope that the serum would produce a renewal of the suppressed renal function, he was given 20 c. c. serum under the skin, and although there was noticed a slight reaction in temperature the subnormal, the kidneys did not react, and he died of a uræmic seizure twelve hours after the administration.

One word as to the possibilities of this serum as outlined by Professor Sanarelli; because of its not being an antitoxin it does not tend to overcome the toxins of yellow fever produced in the system, and depends for its curative and prophylactic properties upon its germicidal influence. Hence it is argued by Professor Sanarelli that its use will be absolutely negative in cases in which an amount of toxin has been produced sufficient to destroy life. These cases he does not attempt to treat, passing them by as out of the pale of serum influence. To those who have witnessed the successful struggle of many apparently

beyond prognostic hope, there will at once arise the question of properly determining in such cases the fatal degree of intoxication which exists; therefore Professor Sanarelli advises and insists upon the early use of the serum, and thus the destruction of the organism before it has elaborated the fatal proportion of its toxin; such an exhibition of the serum invites the criticism that the mortality rate must be that of selected cases, and, therefore of diminished statistical value; and in an epidemic of mild type, such as the recrudescence of this fall in Louisiana, it would be contradicted.

As to its influence in case No. 1, there was no doubt a very prompt reaction evidenced by the rise of temperature and pulse, and the great congestion of the face and skin of body. This was followed by a cessation of all pain in a fall of pulse and temperature to a point lower than before the administration. The second and third injections showed less marked reaction. The exhibition of the serum produced a free flow of nonalbuminous urine, some pyalism, and free perspiration. I am free to confess that the man would have done equally well with any ordinary medication.

In case No. 2 I am satisfied that the boy would have done as well without any medication. His mental and physical condition were not improved by its use. The influence of the serum upon the vaso constrictors was very pronounced, and caused mental and physical suffering. At first the urine was quite free, and always nonalbuminous, but on the second day became more scant, yet the skin acted very freely. The rash was very general on trunk and limbs. The face, eyelids, and ears were swollen, puffed and bluish in color, with slightly raised patches which resembled urticaria, the general surface being erythematous with scattered and intensely itchy plaques. The reaction in this case was excessive, the temperature rising to 40 deg. C. The family requested us to desist from this treatment, and I did not object since the pulse was intermittent and dicrotic. As to the doses in these cases, I had never observed the action of the serum, and therefore refrained from the exhibition of the full dose directed by Professor Sanarelli, that of 20 c. c., and feel satisfied that the latter dose would have caused much alarm, and probably harm, in the second case reported. I regret that I have not been able to accomplish your purpose to have a full test made of this serum, but I realized that it was more necessary to

arrive at a just conclusion of its merits, based on correct data, than merely to use it on uncertain cases. A more thorough test will be made at the earliest opportunity.

Respectfully yours,

EUGENE WASDIN, Surgeon, U. S. M. H. S.

To the Supervising Surgeon General,

WASHINGTON, D. C., November 10, 1898.

—*Public Health Reports.*

A Study of Twelve Cases of Malarial Hematuria, Including Four Autopsies.*

BY M. GOLTMAN, M. D., AND WM. KRAUSS, M. D., MEMPHIS, TENNESSEE.

This essay is based upon the study of twelve cases, in which analyses of the blood, urine, feces and vomit were made, and includes four autopsies. We received eight calls outside the city, and the cases furnishing the four autopsies occurred in the city. Of the twelve cases seen by us, nine died. Three died during the height of the attack on the third, fifth and sixth days respectively. Six died after the hematuria had disappeared, that is, from two days to three months after the urine had cleared up and was passing in fair quantities. Uremia was the cause of death in at least three of these cases; three died suddenly, apparently of heart failure, after the urine was clear and regenerative changes were present in the blood.

Three cases occurred in females; two were sixteen, and one thirteen years of age. Two recovered and one died. One case occurred in a strong, robust, pure black negro, fifty years old, who had lived in the community forty years; he died. The other cases occurred during vigorous manhood and adolescence. Four had had previous attacks. In one the fifth attack proved fatal, one died in the third attack, one in the second, and one recovered from the fourth. The other deaths were in first cases.

A severe chill, followed by fever and hematuria, was the usual mode of onset. In one case there was malaise for twenty-four hours, followed by bloody urine, chills and fever in the order named.

*Being the report of the Sub-committee on Pathology of the Committee on Malarial Hematuria of the Tri-State Medical Association, read at the 1897 meeting.

The triple symptom—hematuria, jaundice, vomiting—was present in nearly all cases. In one, a fatal case, there was only nausea together with the other symptoms; in another which recovered, neither nausea nor vomiting occurred—this was a mild case in a girl sixteen years old. All cases showed more or less remarkable enlargement of the spleen. In nearly all the liver was enlarged and was, as a rule, more tender to manipulation than the spleen.

The tertian parasite was in most instances the predisposing etiological factor. The estivo-autumnal parasite, which is the one found during the hematuria, is probably a plus infection and the provocative agent giving rise to the hematuric attack. It may be already absent and generally rapidly disappears from the blood.

In every case but two the subjects showed every evidence of chronic malaria. One of these, although living in the swamps of Arkansas, claimed never to have had chills or fever and never had taken quinin. She had taken chill tonic.

The eliminative treatment was used in all cases, and in two quinin was administered by the attending physician; one of these did well, all of the symptoms being mitigated with the exception of the heart weakness, the urine cleared up and was passing in fair quantities, but he finally died. The other case in which quinin was used, although showing Laveran's organisms in abundance, promptly died on its exhibition. This must not be accepted, however, as an argument against the use of quinin (*vide infra*). Small doses of calomel frequently repeated and the saline purgatives are what we recommended as intestinal evacuants. It might here be wise to issue a word of caution as to the abuse of calomel. It must be remembered that mercury in large doses aids blood destruction.

We might say here, that an important index to the administration or non-administration of quinin is anticipation of the paroxysms of an acute malarial infection in the presence of chronic malarial cachexia. This anticipation occurring in spite of the administration or non-administration of quinin augurs well for a hematuric attack. We consider this point of considerable prophylactic value.

In the cases giving a history of previous attacks, the data with reference to quinin are complete, and of great therapeutic and scientific interest. According to the verbal statement of

one patient, "he knew that hematuria was imminent, because quinin did not break up the chills." This bears out our own observations, as will be evidenced in the history of cases.

It would seem that the plasmodia have about this time gotten a firm foothold in the economy, which circumstance has of course reduced the vitality of the patient very much. The quinin is either not assimilated or the plasmodia are inured to the quantity used, and the result is anticipation and, finally, hematuria. Large hypodermatic doses of quinin (bimuriate with urea) may here avert hematuria, especially in the budding stage of the organism. Hematuria once established, and the fate of the plasmodia is secondary. They lose their pabulum and die with the destruction of the patient's blood. For example, in several cases a morning specimen of blood would show intra-corpuscular rings in profusion with a count of 3,250,000 and a hemoglobin estimation of 45 per cent. In the evening another specimen would show a few isolated extra-corpuscular bodies no intra-corpuscular bodies, a blood count of about 1,250,000 and a hemoglobin estimate of about 20 per cent. Quinin is manifestly useless if not injurious in such a case. The patient is, so to speak, exsanguinated. The plasmodia are destroyed or their action inhibited through the poisons probably generated by their own metabolism. Therefore, at this critical period, leave the plasmodia alone and give all your consideration to the maintenance of your patient's vitality. This is not mere hypothesis but the result of careful observation and study. *We are therefore forced to the conclusion that, malarial hematuria once begun, quinin has no place in its therapy.* This, however, has no reference to the exhibition of tonic doses in the post-hematuric period.

Quinin hemoglobinuria is probably caused by the disintegrating effect of the quinin upon the intoxicated or injured corpuscles—in other words, a disintegrating effect upon a disintegrating tissue analogous to that occurring on the administration of mercury in syphilis, and may be likened to the specific reaction against bacterial toxins. The injudicious administration of quinin is often responsible for a hematuric attack.

The fecal examinations are interesting, in that they show bile coloring matter in abundance, but little or no bile acids. The black tarry stools, ignorantly called "bilious stools," are not bilious; they are composed of reduced hemoglobin, cleavage products, such as hydrobilirubin, etc., fecal matter, mercurou

oxid from the calomel given and a large amount of mucus. The lining of the intestines is bile-stained, in some places more intensely and in spots, showing the existence of fecal necrosis.

The urine shows much that is interesting. When fresh, blood cells are *nearly always seen*. On standing, the hemoglobin, in which they are already poor, is dissolved out of the corpuscles, and they are not seen. In fresh urine, however, their presence is appreciated. Coloring matter is always found, and overwhelmingly in excess of the number of corpuscles. It is mostly in the form of methemoglobin, as one of us pointed out years ago. Bile coloring matter is always present in excess. Bile acids are always present in mild cases and absent in severe cases. Albumin (serum albumin, albumose, globulin and nuclein) is always present, and considering the alkalinity of the blood and the albumin present in the urine, the acidity necessary to cover all this must be enormous. There is always a high degree of acidity, equivalent to from 80 to 160 per cent. N-10 KOH. The various tube casts, together with leucin and tyrosin, all of which are but an expression of overcrowding and enfeeblement of the liver and kidneys, are often present in the first stages of the disease, and are then of bad omen. In convalescence, casts are always present together with more or less albuminuria, there is desquamative nephritis like that occurring in scarlet fever. This needs the same care and attention to diet and detail as in cases of post-scarlatinal nephritis. This is of great importance and should not be forgotten.

The vomitted matter gives nothing special to consider. It is feebly acid, of a dark yellowish green color; often it comes on suddenly, but usually is preceded by nausea. It is forcibly ejected from the stomach, and consists of products similar to those found in the fecal matter, viz., bile-coloring matter and cleavage products resulting from imperfect metabolism in the liver. Articles of food are rejected in an unchanged state and mucus is present in excess. The stomach has become an eliminative organ.

The blood, of course, presents the most interesting features for study. The number of red cells is always very much reduced. A reduction of 3,000,000 may take place in a single day. The hemoglobin always suffers, being reduced to as low as 30 per cent. within twenty-four hours. The percentage of this substance is always higher, however, than the pallor of the

corpuscles, and the corpuscular count should indicate, on account of the hemoglobinemia, i. e., free hemoglobin in the plasma. The whole volume of the blood is much reduced.

White cells. Early in mild cases and in convalescence leukocytosis is the rule and augurs well for the patient. In the severe and fatal cases a hypoleukocytosis from the beginning, becoming more marked toward the end, has been the rule.

Phagocytosis. The greater the vitality and the resistance of the patient, the greater the evidence of phagocytosis, and *vice versa*. In mild cases and early in convalescence it is not uncommon to see two and three large phagocytes loaded with pigment rods in a single field.

The plasma of the blood contains free hemoglobin, pigment clumps, leukocytic fragments and debris, and is always increased in toxicity. The greater the symptoms of intoxication and the less the evidence of phagocytosis, the more toxic the blood serum.

When *plasmodia* are found, they are present only during the first stages of the disease. We have rarely seen them after the second day in blood from the peripheral circulation. The great corpuscular destruction and the toxemia present seems to be inimical to the further multiplication of these organisms. The tertian is found occasionally, the intra-cellular ring-shaped, and hyaline estivo-autumnal is usually present. In some cases convalescence is complicated by a re-infection. The absence of *fibrin* is conspicuous from the beginning, and is marked in the severe cases.

Regenerative efforts marked by lymphocytosis, polymorphonuclear leukocytosis, eosinophilia, microcytes, and often nucleated red cells of all kinds, may be seen early in the disease in mild cases and always during convalescence.

We conclude therefore that—

1. The red cell necrosis is rapidly progressive.
2. When this necrosis reaches a standstill, morphotic changes take place, and a rapid regeneration results.
3. The hypoleukocytosis is subsequently replaced by a leukocytosis, the increase being chiefly of the polymorphonuclear variety and eosinophiles.

From this analysis of the feces, urine, vomit and blood we may now approach the discussion of the symptoms and the an-

alysis of their significance. We will begin with the first of the triple symptom :

Hæmaturia. This varies in individual cases as to character. When the splanchnic paralysis is great (rigor with very high temperature), the half of it may be pure hemorrhage. The methemoglobinuria, which is the most important feature, is brought about as follows : Normally the waste hemoglobin set free in the spleen is split up in the liver, some of the coloring matter going off as bile pigment and some as urobilin. In this *disease* (we use the term advisedly) the waste hemoglobin is enormously in excess. The liver manufactures an incomplete bile, being largely toxic products, hydrobilirubin and mucus, and as the pressure in the lymphatics, resorption into the circulation takes place, resulting in intoxication and wholesale disintegration of the corpuscles to the extent of killing out the plasmodia and throwing out the additional *methemoglobin*, whose exit is blocked both in the spleen and liver, directly upon the kidneys. This in itself has an injurious effect upon the kidneys, already more or less damaged by a chronic malarial cachexia, repeated chills and other causes, and promptly places the kidneys *hor du combat*. The glomeruli and tubules are distended with disintegrating blood caused by venous (backward) pressure, the labyrinthine circulation is stopped, and a desquamative and finally degenerative nephritis is the result. The hematuria, then, is the result of (*a*), the congestion incident to the chill; (*b*), inability of the liver to get rid of its waste material; (*c*), the absorption of the resulting decomposition products into the circulation with resulting blood disintegration.

Jaundice. The consideration of this symptom, based upon pathologic findings and physiologic deductions, lays bare much to be appreciated. As pointed out above, it is both hepatogenous and hematogenous, primarily the latter.

It is the function of the liver to use up the waste hemoglobin resulting from the continuous physiologic disintegration of the corpuscles. In malarial infection this disintegration is increased. The more severe and continuous this infection becomes, the more marked the evidence of hepatic hyperactivity. This hepatic hyperactivity superimposed upon a chronic blood destruction, soon leads to nutritional changes—cloudy, then fatty degeneration must soon take place, and it does. In the

case of a hematuric attack fatty degeneration becomes acute from six causes: 1, hyperemia and stasis; 2, impaired nutrition of the hepatic cells; 3, toxicity of the blood; 4, rapid disintegration of the red discs; 5, hyperactivity of the hepatic cells; 6, engorgement of the ducts with unformed biliary matter. This is the explanation for the term "bilious" applied to chronic malarial conditions. The microscopic sections explain this more fully.

Vomiting. This symptom is but an expression of toxemia. It is not merely a local disturbance. It is central in its origin and projectile in character. It is a condition which finds its analogue in the vomiting of pregnancy and of Bright's disease. The more severe the intoxication the more severe the vomiting, provided tissue reaction is not impaired.

The extreme nervous phenomena so often seen are also direct evidences of the amount of toxemia, or uremia, as it is incorrectly called. Edema of the brain and, as found in two of our autopsies, a pachy- and lepto-meningitis may be the cause of the nervousness. Violent delirium rather bespeaks the latter conditions.

Following are the histories of the eight cases seen at a distance as well as the four cases comprising the post-mortem series; together with a case in contrast to these which, pure and simple, was a case of *hemorrhagic malarial fever*, and was cured in a few days by the use of quinin.

CASES SEEN AT A DISTANCE.

CASE I. P. A., female, 16 years of age; residence, *swamps of Arkansas*; *uses well water*. Taken sick March 14th with severe chill; never had any chills or fever before, and never had taken quinin so far as she knows; has always enjoyed good health. Following the first chill of the 14th, hematuria occurred in about two hours, when a large quantity of very dark brown urine was passed, and was followed by fever of 105 deg. F., which was reduced by phenacetin. About twelve hours later had two nose bleeds. We saw her about forty-eight hours after the initial chill. She was a tall, well-formed, muscular girl, slightly jaundiced, and apparently not very sick; heart sounds normal; spleen much enlarged, and is not painful to pressure; liver slightly enlarged, and more sensitive than the spleen; the face is calm, skin jaundiced, the scleræ markedly

so; tongue is pale, moist, flabby and heavily coated with grayish slime; pulse 128 per minute, weak and intermittent (loses one beat in seven or eight); temperature 101.5 deg. Kidneys secrete twenty ounces of urine per diem, deep amber in color, and with specific gravity of 1014 (?) reaction 60 per cent. acid; slight albuminuria; very few granular casts and epithelia, the latter being well preserved. Sediment contains very few red blood discs, which are much discolored, and do not contain plasmodia; some pigment granules are also seen; no sugar; urea 4 per cent.

[NOTE.—There must be some error in the record of the specific gravity.]

Blood Examination. Well marked hemoglobinemia; hemoglobin 45 per cent.; red cells, 2,150,000; stain poorly, and show many normoblasts; white cells not counted, but apparent increase of phagocytes, several of which were seen in almost every field containing pigment rods. Vomitus not examined. Feces show mild pepton reaction.

Treatment. Strychnin, nitro-glycerin and normal salt solution, hypodermatically; Basham's mixture and Fowler's solution; bland, nutritious fluid diet; recumbent posture, mild laxatives and plenty of boiled water. [Result, recovery.]

The features of this case are: First, no history of preceding malaria, the primary chill coming on her suddenly while out in the field; second, the absence of plasmodia; third, the presence of normoblasts; fourth, the profound anemia after so short an illness, and of so slight a grade (observations taken less than forty-eight hours from onset); fifth, the very weak heart's action in spite of active stimulation, and the apparently good condition of the patient in spite of it.

CASE II. J. A., aged 32, male; residence, Mississippi Delta; has lived in this region about four years; has had intermittent fever frequently, and one attack of hematuria; uses well water; ground subject to overflow; the flood brought him to the city; had been having "second-day chills" for several days; quinin did not relieve them "but made them worse, because they kept coming every day for the past two or three days." On April 3rd felt very much out of sorts, restless and irritable; had severe headache, which he attributed to quinin, and pain in the small of back. About 5 p. m., had two very severe rigors in quick succession, followed by fever of 105 deg. F. and a large

copious flow of black brown urine at 8:30 p. m. There had been little urine passed prior to this. Severe diarrhea, with tenesmus, and frequent retching, now followed, and was not improved by the calomel given. At 10:30 p. m. the face is anxious, eyes blood-shot, conjunctivæ yellow, skin slightly jaundiced, saliva stains bed linen dark brown, tongue coated dark brown in the center and dry, pulse full and bounding, spleen markedly enlarged, liver likewise and more painful to pressure than the spleen, heart hypertrophied and laboring, lungs admit air freely but sounds are very harsh, especially in upper parts, respirations 36, pulse 120 per minute.

Blood Examination. Hemoglobin 65 per cent.; red cells 3,355,000, and show a very few intra-cellular hyaline estivo-autumnal organism; white cells not counted, but apparently diminished; no phagacytosis; hemoglobinemia marked.

At midnight drew off two ounces of urine, which was like the first passed. Both of these specimens were highly albuminous, contained hyaline and granular casts, renal epithelium and blood cells, which were free from plasmodia; specific gravity 1.032; reaction=160 per cent. N-10; urea 8 per cent.; no sugar; feces reveal no bile acids. Between midnight and 8 a. m. two examinations of stained and unstained blood spreads showed no plasmodia, and hypoleukocytosis.

April 4, 10 a. m. Hemoglobin 35 per cent.; red cells 1,250,000. No plasmodia; white cells extremely scarce; kidneys have not acted; catheter withdrew half ounce of urine, which is much clearer than first, but is highly albuminous and shows casts, pigment granules, renal and bladder epithelium, blood cells, etc.; temperature 103 2-5 deg., pulse 112, respiration 30. From this time until April 6, at 5:30 p. m., when he died, there was a rapid decline in the corpuscular count to 800,000, and of the hemoglobin percentage to less than 20; no plasmodia found in these examinations; no urine passed voluntarily; from one to two drams was drawn off at intervals and found to be steadily clearing, but containing albumin casts, etc. After April 4th the heart began to fail rapidly, and in spite of active stimulation, including hypodermoclysis, kept on weakening. There was practically complete suppression of urine, with coma and alternating with delirium. Edema of the lungs and glottis was the immediate cause of death. We shall not again rehearse the therapy employed in these cases.

CASE III. G. M. C., male, timberman, aged 45; residence. Arkansas swamps; was born in that section; had an attack of malarial hematuria in 1894; uses pump water. On July 26, 1897, about 5 p. m., had light chill, followed by high fever and hematuria in about three hours; seen July 27th. There is nausea and vomiting; headache, with great fullness in head; restlessness, quickened and labored respiration (26 to 28 per minute), slight stupor, skin jaundiced, *scleræ* markedly so; face anxious, *sordes* about lips and teeth; tongue shows dark, thick coating in center, fading away at the edges where the *papillæ* show out bright red. There is great pain over kidneys, liver and spleen; both the latter are enlarged, the spleen markedly so; bowels are sluggish; kidneys are very active, secreting about fifty ounces in past twenty-four hours; temperature 103 deg. F.: pulse 130, bounding but irregular in volume; urine practically the same as in case I; feces show faint pepton reaction (for bile acids).

Blood Examination. Hemoglobinemia most marked; *plasmodes* none; regenerative changes absent; red cells 1,284,000; marked hypoleukocytosis; total hemoglobin, including free hemoglobin in plasma, 35 per cent. From this day, July 27th, until the 30th, in spite of treatment suppression supervened, and he died comatose.

CASE IV. W. J., aged about 50, *pure negro*; residence, Mississippi Delta for about forty years; land subject to overflow; uses water from a well thirty feet deep; had been having slight intermittent chills for about nine days; quinin produces hemoglobinuria, so took "chill tonic." For three days prior to the appearance of hematuria, chills came daily and culminated in two chills on August 3d, the second of which was "awful," was followed by high fever and "blood urine." Symptoms practically the same as in other cases; temperature ranged from 103½ to 99.2-5; pulse 116 to 90; respirations from 30 to 17, between the first and fourth days; heart and lungs normal; urine passing moderately free, about 18 or 20 ounces in twenty-four hours; seven voidings examined, varying from almost black to clear; numbers 6 and 7 contain the usual casts, etc.; no blood cells found; all contain albumin, the later specimens more than the earlier. In number 7 there is a positive bile acid reaction, which is the first obtained in any of the cases. Specific gravity in the different specimens varies from 1.031 to 1.012; reaction acid;

urea 0.02, 0.34, 0.029, 0.021, 0.010, 0.012, 0.015; feces are dark-green, acid, show indol and hydrobilirubin in abundance; mucus in great quantity; no blood discs; no reaction to pepton.

Blood Examination. Hemoglobinemia not so marked as in other cases; hemoglobin 45 per cent.; red cells 2,180,000; no plasmodia. Fourth day--Hemoglobinemia slight; hemoglobin over 60 per cent.; red cells 3,356,000; phagocytes in abundance, loaded with pigment masses; regenerative changes marked, even to the extent of a few normoblasts.

Result. Died suddenly on the night of the fifth day from heart failure, the result of exertion; no autopsy obtainable. From a study of the heart sections of a case dying like the one just recorded, there is shown a marked nerve degeneration and empty cylinders, which goes far to explain the cause of death in such cases. There were three cases of sudden death in the entire series of twelve cases.

CASE V. F. S., female, aged 15½ years white; residence, Marion, Ark.; subject to overflow; has lived locally ten years; has had malaria of the remittent type; has taken chill tonic but no quinin; there is no idiosyncrasy to quinin; uses well water (50 feet deep). This is the third attack of hematuria in seven years. On September 18th was taken with severe chill about 5:30 p. m., which was followed by high fever and a copious flow of dark brown urine (12 ounces); saw her September 19th. This case does not differ from any of the rest in symptomatology, with the exception that there were present marked nervous symptoms and almost uncontrollable vomiting; temperature 105.2-5; pulse 140, full and strong; tongue coated thick creamy-white; bowels moving freely; passed 12 ounces of urine in sixteen hours, the last passing about five hours ago, consisted of about 1 ounce, and was almost black; heart and lungs normal; spleen perceptibly enlarged and somewhat painful; liver markedly enlarged and quite painful.

Urinary Examinations show leucin and tyrosin in conjunction with the usual findings of albumin, casts, etc.

Blood Examinations show entire absence of plasmodia and regenerative changes; only one count was made, which shows about 800,000 red discs; white cells almost absent; hemoglobin less than 20 per cent. Death on fourth day from coma, following complete suppression of urin.

CASE VI. W. W., male, white, 13 years old; residence,

Ripley, Tenn., 500 yards from Mississippi river; land subject to overflow; uses cistern water; has lived in locality two years; had chronic malaria for three months preceding hematuria, which was apparent six hours before he had a chill. With this exception the symptoms were practically as outlined in preceding cases, with the further exception that there were positively no brain symptoms, and the attack was mild in almost every particular. The temperature ranged between $104\frac{1}{2}$ deg. and $99\frac{1}{2}$ deg. F., the pulse between 115 and 125, and the respirations between 31 and 22, between the first and fourth day of the disease. After the first evidence of hemoglobinuria on September 30th, which consisted of a copious flow of dark brown urine, the flow became scant, and the act of micturition painful. After this it became plentiful again, when he passed about four pints per day, which showed up perfectly clear on the fourth day. On the first day it was intensely acid, chlorids diminished, urea increased, albumin in abundance, few casts, specific gravity 1.028. On the fourth day it was a medium amber color, specific gravity 1.014, acidity less marked, urea slightly increased, albumin and casts in small proportions; feces react to pepton.

Blood Examination. First day—Hemoglobin 35 per cent.; no plasmodia; red cells 1,361,000; numerous phagocytes, loaded with pigment rods, are seen in almost every field. Fourth day—Marked regenerative changes present; normoblasts in plenty; blood flows freely at site of puncture, and is of good color; hemoglobin 65 per cent.; red cells 3,456,000; no plasmodia; recovery.

CASE VII. M. M., female, white, aged 13, born and raised in Mississippi Delta; land subject to overflow; uses deep well water. This is the third attack of hematuria in four years. October 10th taken suddenly with severe chill, which was quickly repeated; fever rose immediately, and a large quantity of dark urine passed within an hour; saw her next day. Temperature $103\frac{1}{2}$ deg; pulse 120, full and strong; respirations 24; vomits incessantly a dark greenish material, which discloses bile acids; heart and lungs normal; spleen enlarged and painful; liver much enlarged and quite painful.

Urinary Examination. Specific gravity 1.030; reaction 80 per cent. acid; chlorids diminished but not absent; albumin, casts, granular detritus and few blood discs.

Blood Examination. Hemoglobinemia; mild leukocytosis,

showing phagocytes containing pigment masses but no plasmodia; regenerative changes apparent; hemoglobin 40 per cent.; red discs 2,050,000. Later we received by mail several blood spreads from the physician in charge which showed marked and progressive regenerative changes. Recovered.

CASE VIII. G. W., male, white, aged 30, timberman; residence, Arkansas; uses well water; has suffered with chronic malaria all his life. This is second attack of hematuria; was taken with hard chill on the night of October 20th, which was quickly followed by fever, hematuria and vomiting; saw him next day. Temperature 104.2-5 deg.; pulse 138, full and strong; respiration 30; heart hypertrophied to the left; lungs normal; spleen enormously enlarged and painful; liver enlarged and somewhat painful.

Urinary Examination shows the usual changes; the chlorids are diminished; no leucin or tyrosin present; specific gravity 1.028.

Blood Examination. Marked hemoglobinemia; mild leukocytosis; no plasmodia; red cells 1,824,000; hemoglobin 40 per cent.

This patient made, seemingly, a slow and tedious recovery, but finally died of suppression of urine about two and a half months after the urin had cleared.

POST-MORTEM SERIES.

CASE I. Jas. Freeman, aged 20 years, timberman; residence, Mississippi bottom. Admitted to the St. Joseph's Hospital July 15. Had had tertian fever for about two weeks, which became quotidian for several days before admission; had hematuria on the 10th, preceded by hard chill; when admitted was slightly delirious, passed bloody urine once, temperature steadily rose until he died on the 16th. No more urine passed, no plasmodia. Treatment consisted of quinin bisulph., 10 grains, t. i. d., hypodermatically; calomel in large doses every hour.

Autopsy. The body is jaundiced; there is no cutaneous infiltration; the peritoneal cavity is full of fluid; the organs are pale and have a washed out appearance; all the serous cavities are filled with fluid, which is pale yellow; the liver is enlarged, the gall bladder enormously so, containing six ounces of dark green viscid bile; liver fatty and pigmented, though pale; spleen very large, dark, hyperemic; kidneys pale; capsule slightly ad-

herent; no hyperemia in medulla; intestines contain greenish viscid matter, and are bile-stained; bladder empty; brain anemic, watery. Microscopic sections of liver show the capillaries filled with rod-shaped pigment masses enclosed in necrotic cells; there is very little pigmentation of the endothelia, and none of the hepatic cells, which are shrunken and necrotic or granular. The kidney sections show cell proliferation in, and swelling of, the glomeruli; the tubular epithelia are in a state of cloudy swelling and pigmented, especially in the convoluted tubules; the spleen is hemorrhagic; some endothelia are proliferating; there is round cell infiltration around the trabeculae; no pigmentation and no cell degeneration.

We might here mention the case of D. L. T., residence Arkansas, timberman, aged 30, who was admitted to hospital on July 13th. He had had chills for several weeks before (don't know character); had chill on 9th, again on 10th, accompanied by bloody urine, which was light red and highly albuminous, and contained corpuscles in abundance (a true hemorrhage). On the 12th he again had a chill. After admission on 13th was given 10 grains of quinin bisulph. hypodermatically every six hours, calomel, three large doses (5 grains) every hour. Blood examination showed tertian organisms; no further chills; fever continued several days; recovery complete and uneventful.

CASE II. J. W. A., Arkansas timberman, aged 30; had bloody urine in attacks of fever in 1888, 1890 and 1893. About August 10, 1897, began to have fever; took calomel and sweet spirits of nitre without effect. On September 1st urine became dark colored and he entered St. Joseph's Hospital, with some fever, severe jaundice, injected conjunctivæ, flabby tongue, which was slightly coated, and vomiting; bowels locked for two days; anorexia, stupor with tendency to comatose condition.

Examination. Abdomen distended partly with gas, but chiefly by enlarged spleen, which extended two inches to right of umbilicus and three inches below the ribs; liver was somewhat enlarged (about one inch); area of cardiac dullness normal; slight blowing murmur over apex beat, not transmitted. Lungs revealed harsh inspiration, with prolonged expiration at the right apex, otherwise normal; pulse weak, not very fast, volume poor; often had chills daily, but as a rule every other day. He knew, however, "that he was in for it, because the quinin had no effect." His fever was continuous for ten days prior to his ad-

mission to hospital. During the day and night of his admission he passed three pints of dark claret-colored urine, acid reaction, specific gravity 1.016, containing albumin, casts, and slight granular debris. The temperature at 11 a. m. registered 101 deg. F., pulse 110, respiration 20. Plasmodia having been found by the regular visiting physician, 10 grains of quinin were given hypodermatically every three hours, with $\frac{1}{8}$ grain of calomel per os every hour for the relief of vomiting, which was effectual. At 2 o'clock p. m. axillary temperature was 103 deg.; at 5 temperature 102 $3\frac{5}{8}$ deg.; at 8 temperature 101 deg.; at 11 temperature 104 deg. 5 grains of phenacetin were now given, and repeated every three hours. At 2:20 a. m. temperature registered 100 deg. F.

From this day until September 14th, when he died, there was a gradual reduction of red cells and hemoglobin, until the former dropped from 2,256,000 to 800,000, and the latter to about 15 per cent. The urine, which was examined on the 7th, was brownish yellow in color, normal degree of acidity; specific gravity 1.016; urea 8 per cent.; albumin 11 per cent. by volume, phantom cells; no bile constituents; many flat and round epithelia; many granular and blood casts; leucin and tyrosin in great abundance; feces dark green and viscid; reaction acid; faint pepton reaction, but strongly reacts for bile pigment; indol reaction faint; microscopic examination showed no blood discs; some epithelia; granular matter; dark pigment clumps; mercurous oxid.

Autopsy. Body not much jaundiced, scleræ markedly so; liver and spleen enormously enlarged; the latter measures 18x24 inches; liver very yellow and fatty looking, granular and pul-taceous; spleen dark, pultaceous, interstitial overgrowth, capsule adherent, and of grayish color; kidneys pale, large, pyramids congested, capsule adherent; venæ stellatæ almost undemonstrable, supra-renals black in medulia and hollow, medullary portion being necrotic; heart flabby, pale, no clots; there are two ounces yellow serum in pericardium; lungs free, hypostatic congestion, edema, fluid in pleuræ; brain very anemic, saturated with fluids, especially the cerebellum, which was like alabaster; ventricles full of clear fluid, puncta vasculosa almost absent; bladder empty; intestines bile-stained; peritoneum contains some fluid.

Microscopic Examinations. Liver—Section stained poorly though distinctly; advanced cloudy and granular degeneration

of the hepatic cells; pronounced pigmentation of both hepatic cells and endothelia; pigment is in coarse grains, often rod-shaped; round-cell infiltration in and around the portal spaces; blood capillaries empty; protoplasm retracted; other vessels only partly filled; no plasmodia; some bile capillaries within the lobules are distended with dark green bile. The spleen shows great hyperplasia, almost entirely lymphoid tissue; very few endothelial spaces—that is, proper functioning portion of organ—left; almost no hemoglobin tissue; great pigmentation. Kidney—Marked evidence of chronic diffuse nephritis, without exudation (interstitial); tubules not much dilated; Henle's loops choked with coagulated blood debris; convoluted tubules cloudy or necrotic and pigmented; hyaline degeneration of new connective tissue.

CASE III. A. B., age 33, boatman; admitted to St. Joseph's Hospital September 17th. Wife says he had been treated for Bright's disease for two years; two days ago had chill and fever, which were repeated next day; bowels had been constipated, now loose from purgative; tongue irregularly coated; considerable jaundice; spleen enlarged; liver, heart and lungs normal; lumbar pain; very restless; stomach rejects everything; urine dark brownish red, albuminous; specific gravity 1.015; acid reaction; no sugar; considerable granular debris. No quinin exhibited; other treatment to meet indications. Patient died suddenly September 19th, two days after admission, apparently from heart failure.

Autopsy. Body warm four hours after death; fairly well nourished; skin deeply jaundiced, sclerae markedly so; slight purpura about chest and arms; very slight desquamation about thorax; fairly good layer of adipose tissue; muscle fibers pale; intestines waxy, but vessels prominent; spleen weighs about two and a half pounds, is very soft, pulpy, and a veritable pus sac; liver enlarged, fatty and somewhat sclerosed; kidneys about normal size, right largest, mahogany color; capsule adherent; lungs very pale, otherwise normal; pericardium contains about six ounces of sanguineous fluid; muscular fibers of heart pale, almost fatty; brain extremely pale; membranes filled with considerable fluid; ventricles distended; puncta vasculosa scarcely recognizable; splenic blood shows absence of regenerative changes; absence of plasmodia; cover-glass preparation shows red cells with only a hemoglobin ring, the center being

absolutely colorless; white cells in abundance, which show extreme granular change. (Blood examination on morning of admission shows red cells 800,000; intra cellular organisms, hyaline and non-pigmented; numerous phagocytes, containing organisms, one having three in it; hemoglobin 20 per cent.; evening examination, no plasmodia.)

Microscopic Appearance. Liver—Sections stain fairly well, though there is some cloudy swelling and granular degeneration of the hepatic cells near the central vein; pigmentation is marked in the central portion of the lobule, including both hepatic cells and endothelia; the pigment is in coarse grains, mostly rod-shaped; the capillaries are empty; some of the portal and hepatic veins contain blood in which there are no plasmodia; there is no proliferation; the connective tissue is rather hyaline. Spleen—This shows marked degenerative changes; the trabeculae are hyaline, the endothelia and proper cells are pigmented and somewhat altered; there is small round-cell infiltration near the trabeculae; the malpighian bodies show marked sago spleen; the lymphoid tissue shows only at periphery; the endothelial spaces contain coarse pigment granules; no pigmented bodies are in the red and white cells, and free hemoglobin is markedly diminished; the few polymorphonuclear cells are fragmented. Kidneys—The glomeruli and all the tubules are dilated; there is slight latent chronic "interstitial" change; the epithelia, mostly of the convoluted tubules, are pigmented, the latter are in all stages of degeneration from albuminous to granular; the lumina are filled with hyaline debris, in which phantom cells can be made out; the loops of Henle are mostly blocked with blood debris; the vasa recta dilated and full of blood. Heart—Fibers stain well and show striations perfectly; there are some areas of slight pigmentation and some of connective tissue proliferation; the nerve trunks in transverse section show marked degeneration; empty nerve sheaths are seen and some connective tissue proliferation into funiculus. Brain—Nothing abnormal is seen, except slight remains of lepto meningitis; pigment grains and pigmented cells are seen in the capillary spaces; the vessels are almost entirely empty; no plasmodia.

CASE IV. G. W. B., age 34, laborer; admitted to hospital November 18th; from Ohio eighteen months ago; worked in Arkansas as timberman, and later along the Mississippi river. Had chills at irregular intervals since last spring, taking chill

tonic nearly all the time; had a severe attack with bloody urine in September last, but was at work again in a few days. Last attack began prior to admission; took calomel, sweet spirits of nitre, and increased doses of chill tonic. A chill followed each day, however, increasing in severity until the fifth day, when the urine became bloody. At once came to the hospital, after which he passed about twelve ounces of bloody urine; was delirious at midnight, and remained so for about forty-eight hours; almost complete suppression of urine; pulse dicrotic and weak, but responds slightly to active stimulation, but finally became intermittent. He died at noon of Nov. 26th.

Physical Examination. Heart and lungs normal, except slight friction sound over right lung; spleen enlarged and tender, liver slightly so; kidney very tender; temperature on admission was 104 3-5 deg., but gradually subsided, becoming sub-subnormal on 22nd and 23rd; it then rose to normal, but dropped to 97 3-5 deg. on Nov. 26th. Blood count on Nov. 21st, 1,100,000 red cells; hemoglobin estimation could not be made; no plasmodia. Blood count Nov. 24th, 1,546,000 red cells; hemoglobin 15 per cent.; mild leukocytosis. Died at side of bed in an effort to get up.

Post-Mortem Fourteen Hours After Death—Appearance. No jaundice; extreme rigor mortis; body very muscular; panniculus very thin; peritoneum contained about 500 c. c. straw-colored fluid; upper portion of ileum showed several hyperemic areas; Peyer's patches somewhat raised; a few bile-stained areas where the wall was distinctly thinner; focal necroses; intestine contained dark green fluid feces; the spleen was enlarged, its pulp normal in color, but pultaceous in consistence; the liver was enlarged, rather yellowish with some cloudy swelling, and perhaps some fatty degeneration; the left kidney was enlarged and showed venous hyperemia, otherwise of good color and consistence; right kidney normal size, and had same appearance as the left; the gall bladder was distended by dark green fluid, but small; there were no other lesions in abdominal cavity. The pericardium contained an ounce of yellowish fluid; the heart was pale; both cavities were empty; no clots or thrombi; no inflammatory change; the mitral and tricuspid valves showed some marginal thickening; the lungs were in a state of hypostatic congestion and edema; the left pleura was obliterated from old adhesions; the brain was firm, somewhat pale; slight

effusion under tentorium; pachy-meningitis; adhesions marked; some adhesions between the hemispheres, showing remains of slight lepto-meningitis; ventricles contained some straw-colored fluid; no thrombi; no degeneration.

There was every evidence in this case of regeneration. The abdominal organs bled on section, which is in marked contrast to the other cases. The muscles were of good color, and the bone marrow looked excellent. The specimens from the different tissues were accidentally lost, and hence we cannot give microscopical report. We are satisfied that the exertion of sitting up killed this man, and that the heart would have shown degenerated filaments.

Correspondence.

Editor of the Journal of the Mississippi State Medical Association :

Since my return from Cuba and Porto Rico, I have thought that a short resume of the medical side of army life might be interesting to some of your readers, and especially in regard to the condition of affairs in Santiago, which seems to have provoked a wide and varied field of discussion among those physicians who have been stationed there during the summer just passed. I confess, on my return, I am very much surprised to note that some of the surgeons in charge of troops in Cuba have come back to the States and claimed that no such thing as yellow fever existed among the soldiers who were located in Santiago during the months of July, August and September; but claim that the fever was a form of malaria, indigenous to the tropics—a purely climatic fever. I have read where one surgeon, whose rank of major gives him a high standing in military circles, claims that he was in Santiago de Cuba for several months last summer and that during that time he never saw but one case of true yellow fever. I met this doctor down there and I very much doubt whether he saw more than one case of any fever, as his rank of major gave him more clerical and office work than real medical work. There is no necessity of undertaking to correct his statements that the fever was not yellow, for any thinking physician, at all familiar with the history of this disease and its tropical

birthplace, knows that the southern coast of Cuba has never been free from this curse to our own Southern States; and, too, if the major saw one genuine case of yellow fever, every one knows that there must have been others. For two months, I was stationed on a ten acre island in Santiago harbor, across from the city. On this island was an old Spanish fort, built most likely, a hundred years ago, which we used as a hospital. It was capable of holding about one hundred patients, but in August we were compelled to erect tents, both for convalescents and those cases we thought not to be yellow fever, but of a suspicious character. All of our patients came from hospitals on the other side of the harbor. They were towed over in an open boat by a little steam launch. Sometimes, these patients would be sent over through a burning sun or a drenching rain. I have seen them brought over, lying flat on their backs, with no screen from the terrible tropical sun, with temperatures running from 104 deg. to 105½ deg.—sometimes they were unconscious and on one occasion, we found a dead man. In writing this, I have no desire to criticise the action of those in high positions as to the wisdom of undertaking to isolate these patients, but it seemed to me, as all these cases of yellow fever originated on the other side, with the foci of infection everywhere, that it was inhuman to send them across that sun-scorched water, especially when the facilities for transferring them was so miserable. After a while, our little launch burned out—it was operated by a couple of Spaniards—and then we had to depend on convalescents to row across the harbor and bring all of our drinking water, commissaries and ice. The latter part of September Miss Helen Gould, that patriotic, noble, generous helper of the suffering soldiers, sent us a beautiful launch and many delicacies, and thereby relieved us in our dire distress. For a long time it was utterly impossible for us to get sufficient medicines. During the first few weeks our drug supply consisted of insoluble quinine tablets “C & G” pills (camph. and opium) and comp. cathartics. If we had not had a few medicines in a private case, belonging to one of the surgeons, God knows what would have become of us—or, at least, our patients. During the latter part of August, however, we were enabled to get medicines but we had to beg, borrow and steal to get them. Through the courtesy of the Maltbie Chemical Co. a large box of Zomakyne was sent me and this helped us greatly. The yellow fever of

Santiago is the same type of fever that we had on the coast of Mississippi in 1897, except in being associated in nearly all cases with malaria. Not unfrequently, after all symptoms of yellow had passed, the patients lapsed into a malarial or a typhoid state, and in such cases, with their lowered vitality and our poor facilities for treating them, the chances were against their recovery. Sometimes the patients were markedly jaundiced and the cadavers revealed in most cases the pathological findings of a mixed infection—yellow and malaria. Many cases had retention, and some suppression, of urine. Black vomit appeared now and then, and in several autopsies we found its presence in the stomach and bowels. Spongy, bleeding gums was found in nearly all cases and many had epistaxis and in some cases the tongue would bleed. In nearly, if not all cases, the pulse would drop to 40 and 50, and in some cases to even 34 and 36. The temperature often came to 96 and in one case, just before death, it registered 95. Extreme debility following the attack and slow, wavering convalescence was characteristic in all cases. The patients usually had a chill at the commencement of the attack, soon followed by fever of from 103 to 105 deg., nausea, excruciating frontal headache and pain in lumbar region, calves and joints. The fever when uncomplicated, usually lasted two or three days, running the usual yellow fever course. Albumen was found in fully 80 per cent. of the cases. Briefly and very simply, these were some of the most prominent diagnostic points found in the patients of our hospital. Our death rate was about 20 or 22 per cent. If this was not yellow fever will the Major and Dr. Wasdin, of the Marine Hospital Service, who saw some of these patients, and who told us at the time that he thought it was yellow fever, but who, I have been told, has since disclaimed having seen a case of yellow fever in Santiago, please be so kind as to give it a name? If this is not yellow fever, then *what is yellow fever?*

There is one thing about this yellow fever which explodes a prevalent and very happy belief; there is no such thing as absolute immunity from its poison. At one time, out the six surgeons in charge of the hospital, I was the only one, for some days, on duty, the other five all having contracted yellow fever. All of these physicians had had the fever in previous years but they all had a second dose. I believe, usually, that one attack immunizes, but away down there in that hot climate and being

exposed to its poison night and day, drinking in the germs as you might say, with every inhalation, as we did, one cannot well avoid becoming influenced by its poison. One of our surgeons, a splendid gentleman and cultivated physician, died on the third day of his illness. He had the fever in 1878 and lost some members of his family with it then, but he was again called on to wrestle with his old enemy and, this time, the victory was not his. It was sad to see him die away down there and be denied a resting place in the land he loved and honored. Two hours after his death and as the September sun was sinking in purple splendor behind the Cuban mountain tops and tipping golden the summit of ancient Morro Castle, five of us bore him to our little cemetery at the edge of the water and tenderly, silently laid him in his narrow home under the shade of the tall cocoa trees. No coffin enfolds him, no headstone marks the spot where he sleeps. In a few fleeting years only the sinking sun and the wild birds could tell the story of a forgotten man. Back at the old homestead, in the States, a beautiful daughter longs for the sound of his returning footstep and the music of a voice that is hushed. Poor girl!

J. R. TACKETT,

Late Acting Assistant Surgeon, U. S. Army.

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Corresponding Secretary—D. S. HUMPHREYS, M. D. Greenwood

SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

W. G. KIGER, M. D., President Brunswick
J. R. TACKETT, M. D., Secretary Biloxi
W. A. JOHNS, M. D. Corlntn
P. W. ROWLAND, M. D. Flora
J. D. SMYTHE, M. D. Greenville
H. A. MINOR, M. D. Macon
H. CHRISTMAS, M. D. Tehula
GEO. A. TEUNNISSON, M. D. Monticello
E. A. ROWAN, M. D. Wesson

DR. JOHN B. HAMILTON.

It is indeed with extreme regret that we are called upon to announce the death of the distinguished editor of the Journal of the American Medical Association. He died in Elgin, Ill.,

of peritonitis on the night of December 24. In the death of Dr. Hamilton the profession has suffered a very great loss as he was essentially a leader. In all the numerous official positions which the Doctor had adorned his imprint indelibly remains. *Requiescat in Pace.*

* * *

ATTENTION.

We herewith extend best wishes for a happy and most successful new year. An invitation is most cordially extended to those into whose hands a copy of the Journal may fall to become one of our subscribers.

This issue is sent to all the names on our list and includes quite a number who have been crossed off for subscription arrears. So as many of you who know yourselves to be behind may please come forward and pay up, and thus align yourselves with those who are working for the upbuilding of the profession throughout the State.

It affords us great pleasure to state that the Journal enters upon the new year with every prospect of abundant success and we earnestly hope that all members of the Association may feel that a duty devolves upon them in assisting to maintain the standard so ably inaugurated by Dr. Haralson.

* * *

Ex-Gov. J. M. STONE, Grand Master, and Col. J. L. Power, Grand Secretary of Masons, recently honored Biloxi with their presence in response to an invitation from the local lodge to lay corner stones for three new public school buildings which had been generously donated by these liberal and broad-minded citizens, Messrs. Howard, Lopez, Dukate and Gorenflo. At first thought one is simply struck by the big-heartedness of these donors, but with the next breath we become impressed with the breadth and scope of public schools and what they really mean for our country. The future of this nation rests with the steady, level-headed men with good common school education advanced to that point where they have become sufficiently acquainted with ancient and modern history to beware of the evils which overtook all those old peoples who had empire over the world. We live very fast in these modern days and we know and learn many things of which the ancients

were ignorant. In this age of electricity when time is so limited that actually in England they have in contemplation suburban roads to carry passengers all day and freight all night. Now that is fast living. But returning to our subject of the breadth of public schools, it is evident that the curriculum of these schools will have to be broadened because there are many, in fact quite a majority, of the pupils who never go beyond them. To make them most useful it behooves the powers that be to embrace in its studies those things most necessary in the daily affairs of life and to eliminate those features which are not of such moment and yet require an extensive expenditure of time. For the instant just consider spelling and grammar. Both of these studies are entirely arbitrary, that is to say they were made by us ourselves and if we find them to be cumbersome or objectionable it is certainly in our province to remedy them. Both should be simplified, one by elimination of unnecessary letters, the other by a uniform system of conjugation so that all irregular verbs would be made regular, regardless of sound to some superæsthetic tympanum. By a judicious system of pruning, time could be gained for the proper instruction of the pupils as they advanced from grade to grade, along anatomical physiological, chemical and sanitary lines. This last should be reserved for the pupils of the higher grades and should include those features which would tend to make a more thoughtful and considerate citizen of the student. Preventive medicine is the keynote of the future and every boy and girl in the schools should have a fundamental knowledge of this subject. The natural history of epidemic and such infectious diseases as consumption should be so grounded in their minds as to forever impress upon them the value of preventive measures. Never mind the diagnosis and treatment and pathology and such other features as may require years of study to master. Leave all that for the doctors.

MOST heartily do we of Biloxi thank our visitors for their kindness in coming, and cordially do we extend an invitation for a repetition. We have great civic pride in both of these gentlemen, for the Ex-Governor as a firm, true to himself and true to his friends, man, who under any and all circumstances does what is right, for Col. Power as one man whose every

thought has been for the welfare of others, who never lets a year go by without doing his utmost for the poor and distressed, the widows and orphans.

* * *

It seems to us as if our worthy friend, the editor of the Texas Red Back had overshot his mark in doubting the existence of a mild yellow fever. To our mind there is just as much ground for denying the fact that such a thing as mild typhoid, or mild diphtheria or any infectious disease is ever seen. We all know that they are seen, and the sooner we recognize the fact that the present type of yellow fever is in just the same relation to the fever of '53 as is the present extensive epidemic of smallpox to the old form of that disease which killed fifty per cent of its victims the better it will be for us in the South. Something, just what it is I don't know, has modified to an enormous extent the virulence of variola for the past three or more years. Now I want to ask in all reason why this same thing could not have happened to yellow fever. Unless I am very much mistaken, every epidemic since 1853 has shown a tendency to become milder. The official mortality of 1878 is about 19 per cent. Those of us who have had anything to do with mortality statistics of an epidemic can vouch for the statement that while all, or nearly all, of the deaths are reported not more than fifty per cent. of the cases are. It was customary for the New Orleans doctors, for instance, to only report serious cases. The same plan has been followed there this year and just look at the official mortality of over 47 3-5 per cent. Doctor your case is lost.

* * *

By one of those peculiar oversights incident to printers and editors, the name of Dr. Gant was omitted from the list of those returning to their homes after the campaign against the fever. An apology is duly tendered but hardly needed as wherever the name of Gant is known it stands as a synonym for all that is best and noblest in man and as such it is not necessary to say that he would always be found in the hottest of the fight, for that goes without saying. Down here on the coast where we know and love him so well the "Father in Israel" will never be forgotten even though his name may for the moment escape enrollment.

Public Health.

MOUSE TYPHUS.—The Austrian government has made arrangements to exterminate the mouse pest in lower Austria by inoculating mice with Loeffler's mouse typhus bacillus.—*Munich Med. Woch.*, November 8, *Journal Am. Med. Ass'n*.

TOBACCO.—While it is fortunately true that these effects, which are almost entirely functional, rapidly disappear when its use is discontinued by those who have reached manhood, it is very different with adolescents, in whom the habit of smoking causes impairment of growth, premature manhood, and physical prostration. The question as to the effects of tobacco on the growing boy or youth has fortunately been removed from the sphere of sentiment and speculation, and is now settled by careful scientific investigations. "From measurements of 187 men of the class 1891, Yale, Dr. J. W. Seaver found that the non-users of tobacco gained in weight during the college course, 10.4 per cent. more than the habitual users, and 6.6 per cent. more than the occasional users of tobacco. In height the non-users increased 24 per cent. more than the regular users, and 12 per cent. more than the occasional users. In increase of chest girth the non-users had an advantage of 26.7 per cent. and 22 per cent., and an increase of lung capacity of 77.5 per cent. and 49.5 per cent. respectively. These facts in regard to the dwarfing effects of tobacco are corroborated by observations on the class of 1891, Amherst, made by Dr. Edward Hitchcock. He found that in weight non-smokers increased during their course 24 per cent. more than the smokers; in increase in height they surpassed them 37 per cent.; in gain of chest 42 per cent., and in gain of lung capacity 75 per cent. It is probable that alcohol and other poisons have similar effects."—*Storer*, in *Jour. Am. Med. Ass'n*.

Abstracts and Extracts.

RESULT OF WIDAL'S TEST IN THE DIAGNOSIS OF TYPHOID FEVER FROM DRIED-BLOOD SPECIMENS.—Biberstein has recently deprecated the dried-blood method as impracticable, saying, as the agglutinating substance exists only in the plasma or serum, and as the volume of corpuscles in a given unit of blood, especially in pathologic conditions, varies in a marked degree, it is impossible to procure an accurate unit from which to estimate the dilutions when the corpuscles are present. Further he holds that the use of attenuated cultures does not facilitate the diagnosis in the dried-blood method. The value of the different methods of conducting the diagnosis can only be determined by the results of a large number of examinations. If such examinations. If such examinations can not, in the main, be shown to be correct, we will have to agree with Kuhman, who concludes that the serum diagnosis requires an exact laboratory study, in which form it is not suitable for general practice. The deductions from the examinations of Johnston, Bloch, Stewart, Westbrook and Wilson and our own series of 109 previously reported results, do not seem to warrant such a limited application. Stewart found in 1000 tests made in Philadelphia, 969 cases correctly diagnosed. In the 31 failure reported the reaction was present three times in cases that were not diagnosed as typhoid, while in 28 it was absent in cases that subsequently proved to be typhoid. In our own series of 109 examinations in 1896, the test failed in 7 instances, the reaction being observed in 5 cases that were not typhoid and being absent in two when typhoid was diagnosed. Two of the five cases mentioned, however, presented undoubted histories of having previously had an attack of typhoid fever. The reports of most observers seem to indicate the possibility of a small percentage of failures in making a positive diagnosis, even among those depending entirely upon the examination of the serum, as Comba, Ziemke, Stern and Courmont. They have made the most careful dilutions in series for the different cases that they have examined. Whatever method is used, the failures are to the absence of the agglutinating substance during the the first days of the disease, and on the other hand, to the presence of an unusually strong, normal agglutinating substance.

In regard to the influence of a previous attack of typhoid upon the test, opinions are now giving it less importance because it has been found, by repeated tests after typhoid, that the real reaction of the disease disappears in adults during the first six months after convalescence, and in children somewhat more quickly. (Courmont.)—*Gehrmann in American Medical Association.*

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INFECTIVE NATURE OF ECLAMPSIA.—Professor Stroganoff asserts that eclampsia should be included among the infective diseases, giving as his reasons: 1. That it is a general disease, affecting all the parenchymatous organs. 2. That it is an acute affection, commencing explosively or after a certain prodrome. 3. The fever that accompanies it occasionally, especially the postmortem thermic elevation peculiar to an infective disease. 4. One attack confers immunity. 5. The marked genus epidemicus; in 1897 25 per cent. died, while in nineteen cases this year there has been no mortality. 7. It is impossible to explain the increase of eclampsia in populous centers otherwise than by accepting the theory of its infective character, which he is now seeking to prove definitely. His communication in *Wratsch*, Nos. 26 to 35, contains tables showing the links in a number of series.—*Journal Am. Med. Ass'n.*

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PHYSIOLOGIC ALBUMINURIA.—Herter, before the New York Academy of Medicine, recently (*Phila. Med Jour.*, October 29) emphasized the fact that when certain delicate tests for albumin are employed, there is serious danger of calling substances albumin that have an entirely different origin and significance. He considers the cold nitric and potassium ferrocyanid tests, though not entirely free from this objection, used with the heat test, the most practicable means of recognizing albumin. Where these tests fail to disclose albumin in the urine, which may be found by other reagents, the patient may be assured that he has no albuminuria, and "albuminurias that can not be recognized by the three tests mentioned are only important as material for erroneous practical conclusions, and have no interest for the practitioner."—*Journal Am. Med. Ass'n.*

THE TREATMENT OF CONSTIPATION.—Dr. T. Lauder Brunton (The London Lancet) regards this symptom as the reaction of a healthy organism to unfavorable surroundings, viz., too soft food, too little water or too little exercise. For the first, one may advise bread, either made of the whole grain or with more or less bran; vegetables in abundance either cooked, as spinach, cabbage, broccoli, Brussels sprouts, cauliflower, carrots, turnips, parsnips and the like, or raw, as tomatoes or celery. Fruits are of advantage—melons, apples, oranges and figs. When stewed prunes are inefficient in keeping the bowels open, some senna leaves may be tied in a bag and placed in a receptacle in which the prunes are to be stewed. This plan has often been successful when the ordinarily stewed prunes have failed. Sugars in themselves are useful laxatives. A favorite addition to the breakfast is marmalade which contains vegetable salts, sugar, and also the hard skin of the orange cut into small pieces, which are rather indigestible and give a mechanical stimulus to the bowel. Water, insufficient in quantity or abnormal in quality, is a cause of dryness of the bowel, which results in constipation, which may be lessened by the taking of a tumblerful of hot or even of cold water on rising in the morning and on going to bed. For waters from a chalky soil, some of the bottled waters, soda, potash or aerated water should be substituted. The habit of evacuating the bowels at a certain time should be formed: at night if the patient suffers from hemorrhoids. Exercise is of advantage, massage, rubbing the bowels in the direction taken by the hands of a watch, is also useful. In delicate women, especially those suffering from ovarian or uterine trouble, exercise may be harmful. In defecation where the floor of the perineum is lax it may be necessary to press the fecal mass forward in something of the same way in which the accoucheur raises forward the child's head. Open air defecation causes a stretching of the floor of the pelvis and affords support to the fecal mass as it is forced backward by the action of the abdominal muscles. This can be imperfectly imitated in the closet by the patient leaning forward to an acute angle. In some cases hydropathic treatment is useful, wet compresses to the abdomen two or three times daily and sitz baths, cold in summer and with the chill taken off in winter.—*Charlotte Medical Journal*.

Medical News and Miscellany.

The Southern Surgical and Gynecological Association met in Memphis on December 6, 7, and 8. Many interesting papers were read and the meeting was quite up to the usual high standard of this very successful society. Officers elected for the ensuing year were as follows: President, Dr. Joseph Taber Johnson, of Washington, D. C.; vice-presidents, Dr. F. W. Parham, of New Orleans, and Dr. W. L. Robinson, of Danville, Va.; treasurer, Dr. A. M. Cartledge, of Louisville, Ky.; secretary, Dr. W. E. B. Davis, of Birmingham, Ala. The next meeting will be held in New Orleans in November. Dr. E. S. Lewis will act as chairman of the arrangement committee.

At the meeting of the Southern Medical College Association in Memphis last month it was decided that all students matriculating after January 1, 1899 would have to go through a four years course of study, in conformity to the ruling of the American Medical Association. Dr. Ketchum was elected president Dr. Thompkins, vice-president, Dr. Savage, secretary.

Dr. J. F. Hunter, the able secretary, of the State Board of Health, has recently returned from a post-graduate course in New York.

Dr. E. A. Rowan has assumed editorial charge of the *Copiah Signal*. Under the doctor's energetic management we expect to see the "Signal Light" blaze brighter than ever.

GRATEFUL TESTIMONY.—The Imperial Granum Co., New Haven, Conn. Dear Sirs: I feel assured you have the best food preparation on the market. I had a son—a soldier—come home low with typhoid fever. I used the IMPERIAL GRANUM and it acted like a charm. He is now well. It allays inflammation, reduces fever, quiets the patient and is a great blessing. I wish you a happy Christmas. -----, M. D., Newport, Dec. 16, 1898.

AN ENORMOUS BRAIN—

While the average weight of the European brain is 1380 grains, Bismarck's weighed 1867, Cuvier's 1830, Byron's 1807, Kant's 1650, Schiller's 1630 and Dante's 1420. But is weight synonymous with power?

General Wood has appointed Dr. Vincent Gomez, of Brooklyn, mayor of the city of Gibara. Dr. Gomez is a graduate of the Long Island College Hospital and was formerly instructor in otology at the New York Polyclinic, assistant-surgeon at the New York Eye and Ear Infirmary, and a captain and assistant-surgeon in the 112th Regiment, National Guard, New York.--*Brooklyn Med. Journal.*

An ice machine exploded on board the Marine Hospital ship Bay State on the 6th inst, killing one man and wounding twelve others.

The general hospital in Vienna, where the plague cases first appeared, has been reopened. From this it would appear that all danger of an epidemic has passed.

Publications Received.

State and Municipal Care of Consumptives--S. A. Knopf, M. D., N. Y.

Transillumination of the Stomach with Demonstration on the Person--Chas. D. Aaron, M. D., Detroit, Mich.

Intestinal Auto-Intoxication--Chas. D. Aaron, M. D.

Stomach Disturbances Caused by Hernia of the Linea Alba in the Epigastrium--Chas. D. Aaron, M. D.

Chronic Catarrh of the Stomach--Chas. D. Aaron, M. D.

The Antitoxin Treatment of Diphtheria--H. K. Mulford Co.

Fifth Annual Announcement of the Illinois Medical College.

Clinical Excerpts--Farbenfabriken of Elberfeld Co.

The Phonendoscope and Its Practical Application--Aurelio Bianchi, M. D.

Some Observations of General Interest Regarding the Course and Management of Cataract--J. H. Wood, B. S., M. D., N. Y.

Further Observation Regarding the Use of the Bone-Clamp in Ununited Fractures, Fractures with Malunion, and Recent Fractures with a Tendency to Displacement--Clayton Parkhill, M. D., Denver, Col.

Red Cross Notes.

The Journal

.....of the.....

Mississippi State Medical Association.

VOL. II.

FEBRUARY, 1899.

No. 11

Original Articles.

Train Inspection. ✓

BY SURGEON W. R. CARTER, M.-H. S.

It is not proposed to go into the general question of passenger traffic on railroads from and contiguous to a place infected with yellow fever, but simply to present a few points in train inspection and its necessary adjuncts, which in spite of the fact that they have been in use more or less completely by this service since '93 and indeed in principle since '88, seem to be not thoroughly appreciated.

To take the matter generally let us suppose "A" to be an infected town, with lines of railroad "A. N." and "A. S." running the one through to northern points and the other to a southern ("infectible") terminal. Let the country around this town as far as "X" hold direct communication with it after quarantine is laid, and all beyond establish quarantine. Let that district not farther than "V" have held communication with it under such conditions that it has people in it who have recently been exposed to infection in "A" and is suspected of containing foci of infection as yet unknown.

The problem is to organize the train inspection for these two roads for passenger traffic, through and local.

"RELAY."

The relay of train crews should take place at "R" the last station in the communicating territory. This is not absolutely necessary as any siding near this limit will do; preferably on the proximal side. If an unoccupied siding be obtainable a small place, certainly not infected, and kept inspected will do.

If the communication between the city and the territory between it and "X" is unrestricted there is obviously no need of an inspection on the train up to this place, because an inspector is needed only if there are restrictions to enforce. If this communication be hedged around with certain restrictions, however, "Day Light," "Disinfection of Baggage," etc., this inspection is needed to enforce it.

Passenger traffic beyond "X" must be allowed only under certain restrictions and hence subject to inspection.

"RESTRICTIONS ON PASSENGER TRAFFIC."

This divides itself into permanent and temporary, that is, "pending investion."

From "A" to "X" to be determined by the nature of the communication agreed. Free communication to be allowed between all places between "A" and "X," if under the same rule of communication.

(I) No person to be allowed to pass from "A" north of "X" save immunes, etc. They would go only into infectible quarantined territory. There is no question then of "Through Passenger Traffic" on this road.*

*NOTE.—It is a good general rule that people living in communicating territory, if infectible, should not be allowed freedom of travel in clean infectible territory. This is on account of the risk of foci of infection being established in the former and not being immediately recognized. Still if we *know* that a place is free from infection the fact of it holding direct communication with an infected place does not of itself render those leaving it liable to convey infection, they could be allowed to travel on a certificate of residence. Residents of Bay St. Louis, which place held direct ("daylight") communication with New Orleans (but which was known to be free from infection), were allowed to enter Florida on certificates of residence and this action was safe.

(II) No passengers to be allowed to pass north of "V," save immunes, etc., "pending investigation." For this the reason is obvious.

(III) No intercommunication to be allowed between places between "X" and "Y" "pending investigation."

This is because we believe some place in this district is or may be infected and all are not. Obviously, then, until we can differentiate the clean from the infected places, communication from the latter to the former may then infect a clean place.

(II) and (III) taken together mean that "pending investigation" no passengers are allowed to board trains between "X" and "V," and that the north bound trains go empty into and through this district, unless, indeed, the train for the upper end of the road be made up north of this district.

When the investigation has shown (if it does show) that there is no focus of infection beyond "X" this neutral territory disappears (or will disappear if sufficient pains are taken with quarantine) and the restrictions against travel therefrom, enumerated above, should be removed.

The conveyance by rail of infection beyond "X" is sufficiently provided for by the above rules. Now we believe that there is no infection, or persons recently exposed to infection north of "V," yet there is (or at least may be) always a certain number people who will by private conveyance, or by walking, pass from south of "V" to places north of that point. This condition and the danger from it will be considerably increased if by going a moderate distance beyond the quarantine lines at "V" they can board the train and proceed to any destination they elect. This then is to be guarded against. It is done so far as the train inspection is concerned by requiring a "health certificate" of persons boarding trains beyond "V." This "health certificate" is a misnomer and should be a "certificate of residence," because it witnesses that the holder has resided in a locality not quarantined against for not less than (usually ten) days.

(NOTE.) FORM OF "HEALTH CERTIFICATE."

OFFICE OF BOARD OF HEALTH, }
, 189 . . . }

Health Officer :

To whom it may concern :

This is to certify that Mr. has given satisfactory evidence to me that he has been in not less than ten days, and to the best of my knowledge and belief, he has not been exposed to the infection of yellow fever, and has not been in any infected or suspected locality for ten days

Description: AGE years. WEIGHT pounds. HEIGHT
 COMPLEXION HAIR EYES

.. . . . Health Officer.
 Signature :

Obviously this excludes persons recently from south of "V" and gets rid of the transportation by rail of those going by private conveyance from this territory.

We can generally depend on the small towns and stations next to "V" forbidding people liable to convey infection going to them to remain, while they will frequently make no effort to prevent such people going to them to take the train, and this prohibition to board the train acts to increase the vigilance of these places against the entrance of suspects. Also the knowledge that they cannot board the trains even at places north of "V" enormously limits the choice of places to which people can go, and is thus very effective in preventing them from attempting to pass the quarantine lines.

How to insure that these certificates are true is a problem not to be considered here. Unless much pains be taken they may be very misleading, yet they can be made of great value.

From the reasons given for establishing this inspection it is clear it need not extend indefinitely up the road. It *must* cover the distance to which people south of "V" will go by private conveyance, it *need* not go beyond.

Let us suppose "Z" is beyond ("certainly beyond") this distance. "Health certificates" ("certificates of residence") then will be required of all boarding trains between "V" and "Z" and the inspector on the train must go so far and need not go beyond that point. This inspection will begin at "A" or at "R" according to whether the communication with "A" of the "communicating territory" is limited or unlimited.

This territory into which people *may* come by private conveyance from quarantined territory has been called the "drift territory."

Of course it may not exist (as there may be no neutral territory). An efficient cordon around the quarantined district does away with it. I have not judged it safe to dispense with it in any epidemic I have seen, although it might have been dispensed with at Franklin and during the latter part of the quarantine at McHenry.

Then we get—

IV. Passengers from points between "V" and "Z" shall be allowed to board trains provided they have not been in quar-

antined territory for days, i. e., who can produce proper "health certificates."

V. Beyond "Z" there should be no restriction in passenger traffic.

If this place "V" be at the crossing points of the north and south bound trains it will be very convenient, one tier of inspectors will be enough. The same will be true if it be south of the crossing point, as they can go up on the north bound train and return on the south bound, simply stepping from one train to another.

Notice to the railroad that only those presenting proof (generally specified as "health certificates") that they have not been in any place quarantined for (10) days are to be allowed to board trains as passengers between "V" and "Z," will result in the ticket agents along the lines demanding health certificates as a pre-requisit to the sale of tickets. In general then those on board the trains will have the required evidence. If there were time for the train inspector to examine critically into this evidence, prior to boarding, it would be ideal. In general this causes unjustifiable delay to trains, and the ticket agent, where such exists, has already passed on the matter. A certain number, however, will be found boarding the train between these places, who do not present satisfactory evidence on this point, and therefore can not be transported to other clean places. What is to be done with these people? The practice recently (and I think the proper disposition) is to keep them on the train to the end of the inspectors run. If this be the meeting point of the north and south bound trains he can take them across to the south bound train and carry them back. If the end of the run be not the meeting point of trains, there must be here a building or tents (with necessary equipage) underguard, a "Reception Camp" or "Guard Tents" where these people can be cared for in isolation and sent south with the inspector on the south bound train. These people had best, if the inspector believes that they have been exposed to infection, be taken to detention camp. This was done for the few suspects of McHenry, who were very willing to go. Failing this, as was done most generally, they are taken back to the station at which they boarded the train. The health authorities having jurisdiction over this place should be notified in the meantime, and if there

is no good reason to believe that these people have illegally left the quarantined territory it will be found that they are by these health authorities forbidden to remain at this place and that they either ask to go to a detention camp or to go back to their homes in the quarantined section. It is this bringing back of suspects to the place at which they boarded the train which makes the ticket agent carefully inspect the evidence ("Health Certificate") which these people present. After this thing happens more than once, there are very few roads who will retain such an agent, without a very satisfactory explanation. I have found that after they come to appreciate this and have had a little experience ticket agents become most valuable allies in train inspection service.

So much for the relays, the restrictions on passenger travel and the local limits of the work of the officer who inspects the train.

INSPECTION OF TERRITORY.

It is obvious that when we *accept* certificates of residence (health certificates) from any place between "V" and "Z" we imply that this place is not infected. Also that when we *require* a certificate from such a place, we imply that persons capable of conveying infection, may be at that place if only to board the trains. These persons may possibly develop fever at this place and infect it. The country then between "V" and "Z" ("drift territory") then is predicated as *clean but liable to become infected*. It is necessary then to have at all times authentic information of its sanitary condition and it should be kept under inspection, to see that no place in it becomes infected without our knowing it. This is absolutely essential; else we will be taking health certificates from infected places and allowing people from such places to travel on them, ad libitum, spreading infection.

This inspection of territory then is as much a part a train inspection, or rather regulation of passenger traffic on the lines from an infected town, as inspection of passengers on the train, which is imperfect without it.

It is obvious that the limits and indeed existence of a drift territory depends not on distance but on the fact that persons from the quarantined territory pass up into it to certain distances unguarded, or insufficiently guarded lines of communication.

If this by proper quarantine measures be *prevented* (by cordon or otherwise) there is of course *no* drift territory—a condition which seldom obtains, and in proportion as it is rendered difficult so will this territory become a small factor in our train inspection.

It will be seen that in some points this “drift territory” is the converse of the “neutral territory.” From the latter we allow no egress, until inspection has shown it to be free from infection and from persons liable to develop infection; when it indeed ceases to be neutral territory and inspection for that purpose ceases. For the former we allow egress as long as inspection shows that no place in it becomes infected and inspection is to continue for this purpose as long as the territory keeps clean. In the one inspection will remove or confirm suspicion of infection believed to exist. In the other it is to confirm or deny a belief in the freedom from infection.

For the territory inspected the inspection of neutral territory is frequently a great commercial advantage and generally welcomed, it is already in quarantine and this inspection may relieve it. The inspection of the “*drift*” is absolutely essential for the sanitary protection of other places; but it may lead to quarantine of places in this territory and is not generally regarded with special favor by the place inspected. Of the two it is the more necessary.

Obviously it need not extend beyond “Z” yet it may be (and usually is) advisable somewhat beyond. The inspector for this work, as for that of neutral territory, must be possessed of certain qualifications.

1st. Must be skilled in the differential diagnosis of yellow fever, and of such reputation therein that his diagnosis of yellow fever, positive or negative, will be generally accepted, so as to leave as few disputes as possible as to the nature of the disease which he has pronounced on. No one’s diagnosis will be universally accepted by the inhabitants of the town in which he declares yellow fever. Yet much opposition can be disarmed by conservatism, carefulness and absolute good faith.

2d. He must be immune to yellow fever. Else should he discover an infected place his usefulness as inspector is destroyed as he may not go from such a place into clean territory. Should he (non-immune) expose himself to infection and fail to recog-

nize the disease, he becomes a source of danger to the community which he has inspected.

For a road of this nature running only to infectible territory this system is complete. It requires—

- (1) Relay of train crews.
- (2) Inspection of territory.
- (3) Train inspectors.
- (4) Reception Camp. (guard tents)

All of this is necessary for a complete "train inspection." Without the *relay*, crews of trains are liable to convey infection. The inspection of territory is needed to determine from what places people can be allowed passage. The train inspector is needed to prevent other people than those *allowed* from taking passage. The reception camp is needed to enable the train inspector to carry out his instructions without undue interference with the schedule of trains.

For the road "A. N." it is obvious for the local passenger traffic the same condition exist as for "A. S." and we establish our relays at "R," mark "X," "V" and "Z" as the limits of the "communicating," "neutral" and "drift" territory and establish our inspection of territory, reception camps and train inspectors just as needed before.

But as this road runs through to non-infectible territory which is not quarantined, we can allow through passenger traffic on it from "A" to northern points. So far as the origin of passengers is concerned, this can take place without any restriction, but we must provide that they do not stop in infectible territory; do not hold contaminating intercourse therein while passing through; do not return thereto until the period of incubation has past; and do not then return with fomites. Certain restrictions are necessary then effecting the mode of traveling.

The two first indications are fulfilled by sending the through passengers ("refugees") under the care of a train inspector ("train guard") who simply sees that they do not leave the train. There is little danger in allowing these people to ride in the same coach with local passengers because people generally travel in clean clothes.*

*NOTE—Passengers believed to be especially liable to convey infection are to be eliminated by the inspectors at "A," who examine the affidavits. If found on the cars after they leave the relay they can be either isolated abroad or returned.

But it is customary to give them a train or at least a coach to themselves and this is best; less to obviate the small risk of infection from the clothing of these people to those traveling with them than to enable the inspector to keep them from eluding him.*

*NOTE—To be consistent, if this separation be required to avoid infection of those traveling with them, the train crew who enter the coaches should be required to be immune or isolated. I do not know of any member of a train crew who is suspected of having contracted yellow fever from his passengers.

Whether the same guard goes through from "A" to uninfected territory or several relays of them operate together is a matter of no importance, and is determined by convenience. Whether he is only a "train guard" having charge of these through passengers or whether to this he adds the duties of the train inspector for local traffic also depends upon the train service of the road. There is no need of shutting the windows of the train in passing through places, if it be done to prevent them receiving infection from the "air" of the coach. Whether it is to be done to prevent things being thrown out of the window the guard and local authorities must judge.

At times this guard must be a physician, because if the time in route to non-infectible territory is long and the place is badly infected, there will very generally be cases of yellow fever occurring en route. At such times it may be necessary to attach an extra coach as "hospital car," I think the latter will be not often needed. It is but seldom that the inspector for local traffic need be a physician.

Let us note that the functions of this train inspector (train guard) for through traffic are almost in contrast with those of the train inspector on the lines with only local traffic. The duty of the first is to prevent people from quarantine territory *leaving* the car in infectible territory, he is a guard and nothing more. The duty of the latter is to prevent persons from quarantine territory *boarding* the cars in clean territory.

To prevent the return of these people (after we have conducted them north) to non-infectible territory until the period of incubation has past and to prevent return at all with fomites is confessedly difficult; and to do so *absolutely* is to my mind impossible; while it can be hedged around with safe guards that bring it within the limits of safety given by other quarantine

precautions. Of all persons boarding the train to go north affidavits that they "will not return to any place quarantined against A" or "will not return for ten days" is required. These are taken up by the guards or train inspectors. If the second form be the one presented the baggage of the passenger is disinfected and labelled and a certificate to that effect given him. It is not claimed that an affidavit of this kind gives absolute protection, or even a very high degree of protection. Still that it is not taken an absolute levity that it does give protection to some degree, is shown by the very considerable proportion of those who subscribe to the second form, requiring the disinfection of baggage. This was always complained of much more, it seems to me, than the inconvenience justified and was submitted to rather than take the first form of affidavit.

A list of the passengers (giving date of arrival and if possible address) going to each principal place of reception of refugees, especially if these be distributing points for passenger traffic south, is made out daily from the list of train inspectors. This is to be furnished to the inspector stationed at such a place and by him furnished to the different ticket offices in that town.

A supervision of the ticket office at this place and requiring residence certificates of those purchasing tickets south will generally be sufficient to prevent most of the "back" travel. This can be supplemented by inspecting the roads leading south from such places. As stated before it is not claimed that these methods give absolute protection, but it is believed that this is about all that can be done without unduly interfering with traffic and is within the limits of safety established by other quarantine proceedings.

The disinfection of passenger coaches (used for through travel) before coming south again, should also be mentioned as a part of this system. For the reasons given in it is not claimed to be a necessity but it is advisable as is, though less so, the disinfection of baggage and mail cars either at the same time or at the infected place. (Young)

Passenger traffic on lines crossing either of the above lines is obviously to be treated in accordance with the country it runs through and its terminal. If it passes through "drift" territory it will require inspection for local passenger traffic. If it runs to a non-infectible point, receiving refugees, we may allow

transfer of refugees to this line if other conditions render it advisable.

It is not pretended that these notes cover the whole subject of train inspection but it is believed that the point on which I have laid stress, while perfectly obvious, have not been brought out systematically by others writing on this subject.

Let us illustrate the above principles, by some of the quarantine measures of this year.

McHENRY, MISS.—Yellow Fever—Seven cases were reported here the evening of June 9. The first cases, two of them, occurring May 19.

A hasty inquiry showed that there had been such communication between this place and the territory along the G. and S. I. railroad, south of Hattiesburg, and from Lumberton to Gulfport. That there were a number of people in this territory who had been at McHenry, within the past ten days, who were thus liable to develop yellow fever, and too, as the fever had been in McHenry over three weeks, there was reason to fear that foci of infection already existed in this territory. From the fever in McHenry being confined to private houses, none being in hotels or boarding houses, both of these risks were adjudged less than had the public houses been infected.

1st. All places were quarantined against the town and a cordon thrown about it. There was thus no communicating territory.

2d. Obviously the district south of Hattiesburg, from Lumberton to Gulfport inclusive, was "neutral territory."

It was accordingly quarantined against, "pending investigation" and passenger traffic, within this district, recommended to be discontinued "pending investigation."

An inspector (of territory), Dr. Perkins, of New Orleans, was taken to Gulfport on the morning of the 10th, and stationed there. He was directed to make a house to house inspection of that place as often as possible, move all who had been exposed to infection out of town, and see that *this* place be kept clean. Particular pains were taken in Gulfport because, if infected; it would be a danger to the line of the L. and N. railroad on which in its immediate vicinity were a number of considerable towns.

Three other inspectors of territory, Drs. Stone, Tebo and Rohmer were placed on the line of the Gulf and Ship Island

railroad, and directed to inspect this above defined "neutral territory."

3d. The line of the L. and N. from say between Scranton and the Rigolets, the Gulf and Ship Island from Hattiesburg south, and the Q. and C. from Hattiesburg to Honey Island were recommended to be considered "drift territory" and no restriction of travel imposed thereon, save that certificates of residence be required of those boarding trains in this section.

This part of these three roads then were to be covered by train inspection.

This division I say was the one recommended. The State Boards of Mississippi and Louisiana, and the Board of Health of Mobile, however, decided to include the line of the L. and N., from the Alabama line to the Louisiana line, in as neutral territory in which unknown foci of infection were suspected to exist and quarantined it "pending investigation."

While the writer thinks, as he then thought and said, that the quarantine of the coast was not necessary, it is not unnatural that different people should differ in judgment about the limits of "neutral territory." He saw, however, and can see now, no sanitary reason for holding this quarantine on, as was done by some boards after inspection had shown that this territory was free from fever and had sufficient quarantine against McHenry and suspected places.

Tents were placed just south of Hattiesburg under guard, to whom any suspects on the trains going north on either road were remanded until the train went south, when they were taken by the inspectors on these roads south to New Orleans or Gulfport, and sent by the inspector on the L. and N. to the camp at Fontainebleau, where they were taken in charge by the officers in charge of the camp. A small number of people from McHenry, attempting to violate the quarantine, were thus handled. Those picked up on south bound trains also went to Fontainebleau without, of course, going into the guard tents.

The inspectors of territory soon reported that there were a number of people who had left McHenry within the past ten days at points between McHenry say and Gulfport, and reported suspicious cases of fever at Perkinston, Bond and at Brelands.

In the meantime some of the train crews of the G. and S. I.

railroad, which had been exposed to infection while working around McHenry and had been moved out of Gulfport.

Relays were established at Landon and Maxie, and the investigation of the coast having satisfied the Mississippi Board of Health that there was no infection there quarantine was raised (save by Louisiana) against all save the line of G. and S. I. between the relays.

Later on this territory showing no yellow fever, and the premises where suspicious sickness had occurred being disinfected it was declared clean and the relays moved close to McHenry, in which the work was done by a switch engine and special crew. There was then no "neutral territory."

The work at Jackson, Miss., illustrates the handling of both kinds of roads; those running to southern terminals, and those going north.

The fever was announced here September 10th. As soon as it was announced and prior to the laying of any quarantine, a considerable number of people from Jackson left the town and went into the surrounding country, mainly by private conveyances.

The counties of Rankin and Hinds, and possibly some others, contained then people recently from Jackson, some of whom had possibly been exposed to infection, though there was no reason to believe that any focus of infection already existed outside of Jackson. Quarantine was then laid against the city. There was thus no "communicating territory."

A glance at the map will show that the Illinois Central runs from Jackson north to non-infectible territory, into which these people could be allowed to go with no restrictions so far as residence is concerned.

The I. C. railroad going south; the A. and V. passing through Jackson, from Vicksburg to Meridian; and, the two branches of the Y. and M. V., going respectively to Yazoo City and Natchez led only to south points and were then analogous to the line A. S.

Inspection was established on all these roads, on the I. C. railroad to extend from Osyka to Canton; on the A. and V. from Vicksburg to Meridian; on the other two lines from Flora to Yazoo City and from Raymond to Natchez. Health certificates were required on these lines from all places between the

terminal mentioned, and including Flora and Raymond. The distances traversed by the inspectors exceeded what could be reasonably considered "drift territory," but was selected for convenience to get a good stopping place, and on the Illinois Central for being a meeting point of trains, and no inconvenience was caused by requiring health certificates from the small amount of territory covered unnecessarily. Certificates were not required from Meridian, Vicksburg, Natchez or Yazoo City.

FOR RELAYS.

The lines from Yazoo City to Natchez were not allowed to enter the quarantine limits at all. The A. and V. and the I. C. both did their business in the city with switch engines, the I. C. furnishing special cars for passengers, express and mails, and the A. and V. for the mail and express, taking no passengers. In both cases making the transfer out of town—one at asylum switch and the other at Pearson. No relay camp was required for this work as the crew of the switch engine remained on their own cars, and stayed out of the quarantined district a very short time, about half an hour, per trip. Both relays, however, were under guard. Reception camps were established just south of Canton, at Osyka, just west of Meridian, and at Vicksburg on the eastern limit of the town, and at Natchez and Yazoo City.

The country covered by this inspection, especially that in which the refugees from Jackson had gone, required inspection, and an inspector of territory, Dr. Waldaner of Vicksburg, was assigned to this work although subsequent developments required his services elsewhere.

Such people of Jackson as wished to go north were allowed to go at first on separate coaches attached to the day through train of the I. C. railroad. Later on, when New Orleans became infected, they went into the same coaches with the New Orleans people, on a special refugee train. A guard was sent with them to north of Carbondale, Ill., on the main line, and beyond Paducah, Ky., on the branch. These guards were not relayed, making the entire trip with the refugees to the above destinations.

The system of relay by switch engine in town is especially applicable to towns which are not terminal for railroads and was used also at McHenry.

NEW ORLEANS.

The work at New Orleans might be described as illustrating with small variations all the principles set forth in this precis. We will only mention it with reference to the communicating territory. The fever was declared here September 17th, in the evening, and the parishes south of the city and Jefferson and St. Charles elected to hold unrestricted communication with the city, as did St. Tammany. (This, however, is believed to be non-infectible or difficultly infectible territory.)

The country along the line of the L. and N. west of Gulfport elected to hold "day light communication with disinfection of personal effects of immunes" with the city. The lines of relays then were established at Slidell, Dirt Pits, Laplace, Johnson, Avondale and Grand Gulf. No inspection was made for the communicating territory save along the line of the L. and N. railroad where the restrictions of day light communication were in force. These restrictions were enforced west of Gulfport and complete quarantine for Gulfport and east of that place by inspectors on the train.

On the L. and N., the Q. and C. and I. C. railroads, all going to northern points, through passenger traffic on special train under relays of inspectors was allowed. On the other three roads local traffic began after passing the different communicating territory, and went on under inspection. No passengers from New Orleans being carried beyond the communicating territory.

The Prevalence of Tuberculosis.

By W. A. EVANS, M. D., 103 STATE ST., CHICAGO, ILL.

The public does not comprehend the importance of tuberculosis, nor does the medical profession. Its economic importance surpasses the tariff, the silver question, or any other question engaging public attention. Were the money considerations hinging on the tariff multiplied tenfold, they would yet be small in comparison with this, the greatest of all questions. To the medical profession it has this interest, and, in addition, other interests of great importance.

The disease has perhaps existed always. It was the Great White Plague of history. Sayd Hirsch, "It is emphatically a disease of all times, all countries, and all races. No climate, no latitude, no occupation, no combination of favoring circumstances, form an infallible safe-guard against the onset of tuberculosis. However, such conditions may mitigate its ravages, or retard its progress. Like typhoid fever, phthisis dogs the steps of man wherever he may be found and claims its victims among every age, class and race."

The following are some facts showing its distribution at the present time:

The statistics of the Department of Health of Chicago from 1851 to 1896 show that 39,005 died of tuberculosis. This is 10.53 per cent. of the entire number of deaths, or about 1-9. These statistics are open to three objections:

1. Tuberculosis is always under-reported rather than over-reported. The reason for this will be apparent on a moment's thought.

2. A large proportion of the Chicago deaths from tuberculosis do not figure as such, because they die and are buried in a country institution just outside the city limits.

3. No statistics prior to the discovery of the tubercle bacillus are of great value.

Most of the statistics that follow are from Zubiana. In Paris and in the Department of the Seine, 14,563 people die each year of tuberculosis. This represents 465 deaths for each 100,000 inhabitants. Of 1000 deaths, 200 are due to tuberculosis—1 in 5. In all of France each year 170,000 to 200,000 people die of tuberculosis.

At Vienna tuberculosis causes the death of 450 people for each 100,000 of population, or 193 out of each 1000 deaths from all causes.

In Buda-Pesth 646 for each 100,000 inhabitants, or 219 in each 1000 deaths.

In all Germany, according to Leyden, there are 170,000 deaths from tuberculosis annually. Leyden says that any given time there are 4,300,000 people with tuberculosis in Germany. Osler gives the same number for the United States. The Worms Commission found that 1 out of every 50 people had tuberculosis. Kohler, speaking at the Stuttgart Conference on tubercu-

losis, said that amongst all the people who die between the years of 15 and 60, one-third die from tuberculosis. A fact," exclaimed L'Emsen, "which cries to Heaven."

Tuberculosis kills thirty times more people than small-pox and scarlet fever together; sixteen times more than typhoid fever, and eight times more than diphtheria. It kills four and a half times more than all four of these diseases together.

In Italy, from 1865 to 1893, according to Celli, cholera killed 214,651. During this time tuberculosis killed over two million.

In 1854, the year in which cholera raged with greatest virulence in Germany, the death rate was 349 in each 100,000; in the same year the death rate from tuberculosis was 369 in each 100,000.

Bertillon showed that in Paris in 1893, of 1000 people dying of tuberculosis, 184 were from 1 to 20 years of age; 448 were from 20 to 40 years of age; 313 were from 40 to 60 years of age; 55 were above 60 years of age.

This taken in connection with Kohler's statistics showing that of the people dying between 15 and 60 one-third die of tuberculosis, constitutes the most appalling part of the story. Until 15 the child is a dependent. After 60 the man is usually a dependent, either on his family, or else on his savings. The people between 15 and 60 are the people on whom these other people depend. They are the carriers of the world. Upon them the world depends. One-third of them die of this disease. What is worse, they do not die in fifteen minutes, in fifteen days, or even in fifteen months. They live on through a long time, not only a menace, but a burden. Thus do one-third of the family bulwarks fall.

A word as to Mississippi. Evans' *Plithisiology* gives the following death rate from tuberculosis in Mississippi, and in the counties thereof:

For the State entire, for each 100,000 inhabitants 100 die of tuberculosis.

Alcorn, 190; Amite, 70; Attala, 70; Adams, 120; Benton, Bolivar, 110; Calhoun, 80; Carroll, 140; Chickasaw, 160; Clark, 30; Claiborne, 40; Clay, 150; Coahoma, 110; Copiah, 90; Desoto, 170; Grenada, 160; Hinds, 130; Holmes, 60; Itawamba, Issaquena, 40; Jasper, 40; Jefferson, 60; Kemper, 80; Lafay-

ette, 150; Lauderdale, 50; Leake, 20; Lee, 130; Lincoln, 30; Lowndes, 150; Leflore, 180; Madison, 160; Marshall, 190; Monroe, 110; Montgomery, 80; Newton, 80; Noxubee, 150; Oktibbeha, 70; Panola, 120; Pike, 70; Pontotoc, 140; Prentiss, 130; Rankin, 80; Scott, 30; Tate, 100; Tippah, 130; Tallahatchie, 130; Union, 130; Winston, 100; Warren, 130; Washington, 70; Wilkinson, 140; Yazoo, 110; Yalobusha, 180.

Remainder of group, 110.

These statistics are from the census of 1880, and are necessarily quite inaccurate. Mississippi cannot have reliable statistics until burials are regulated by law.

✓ Meningitis at A. and M. College, Mississippi.

BY W. H. BARR, M. D., SURGEON AGRICULTURAL COLLEGE, MISS.

History of cases is as follows:

November 27th students "A," age 20, weight about 170, had abscess of middle ear. November 29th, abscess ruptured and discharged freely for eight days. December 21st, during night he was taken with pain in shoulder and hip, with sick stomach and headache. December 22d, received in hospital, still sick at stomach, vomiting occasionally, pain in head, temperature 100, pulse 100. Later, 3 p. m., profuse red eruption appeared over forehead, back of hands, chest and arms. The patches were distinct, circular, not elevated. Through the night he was restless, sick at stomach, vomiting several times. December 23d, 7 a. m., grew unconscious, temperature 98.5 F., pulse 78, kidneys acting often and profusely, but urine had to be drawn off with catheter. 11 a. m., ear commenced to discharge and again consciousness returned, would converse intelligently, put out tongue, which was slightly pointed, red around edges, and furred in center. Blind in right eye, head slightly retracted to the left. The slightest noise would cause him to moan and cry out as if in pain. December 24th, temperature 100, pulse 84, head drawn more to the left with stiffness of muscles of neck. Any movement of the body would cause him to groan and complain of pain in neck and head. Afternoon, herpes on nose and lips, right leg and arm motionless, left side of face flattened, immovable and pulled to the right, pupils normal, slightly respond-

ing to light, urine heavily loaded with urates and phosphates, no albumen. December 25th, temperature 101, pulse 94, profound unconsciousness, retraction of head and stiffness of muscles of neck more marked, pulse faster and feebler, respiration shallow and hurried. December 26th, pulse 120, temperature 102, respiration almost stopping at times. Lungs became oedematus and patient died at 1:30 p. m. No autopsy.

Student "H," age 16, spare built. December 27th, 11 a. m., had chill, remained in bed all the evening with slight fever, some headache and sick stomach followed by vomiting. December 28th, temperature 102, pulse 102, delirious and with difficulty kept in bed, crying out with pain in head. Bowels and kidneys moving involuntarily in bed, kidneys acting five times from 11 a. m. to 5 p. m. During the night consciousness returned. December 29th, semi-conscious, complaining much of pain in head and back of neck, temperature 100, pulse 102, urine heavily charged with urates, no albumen, had to be drawn off. Least movement of any part of his body or noise in room would seem to distress him. December 30th, temperature 98.5, pulse 80, pain in head and back of neck, muscles of neck rigid, consciousness returning. December 31st, temperature 100, pulse 80, still suffering with pain in head and very restless, sleeps but little. January 1st, 1899, very little pain, temperature 101.5, pulse 78, takes some nourishment, resting and sleeping naturally. January 2d, temperature 97.5, pulse 72, mind entirely clear, still nervous and easy to cry. From this on continued to improve and recovered without any paralysis.

Student "T," age 16, weight about 165. On night of December 29th had chill. Admitted in hospital December 30th, temperature 102, pulse 108, left side of face flushed, some pain in head, mind clear. December 31st, 3 a. m., grew unconscious, temperature 100.5, pulse 106, urine had to be drawn, full of urates and phosphates and about 10 per cent of albumen, left side of face motionless and somewhat drawn to the right, muscles of back of neck stiff, incoherently crying out, "Oh, my head!" On any attempt to move his body or any member of same, or when spoken to, would moan and grow restless. January 1st, 1899, temperature 98.5, pulse 108, herpes on lips, consciousness returning, would answer questions intelligently, and recognized persons about him. Tongue pointed, red edges, and

furred in center, no splotches, kidneys and bowels move naturally. January 2d, temperature 100, pulse 120, very restless, slept but little on night of the first, mind not so clear, complaining of great pain in head and back of neck, often putting his hand to back of his neck; face on left side paralyzed and drawn to the right, muscles of back of neck stiff and painful on motion. Later in the day right arm and leg became motionless, left arm and leg were kept constantly in motion. Head more retracted to the right, pulse faster and weaker, temperature higher, and respiration more hurried. January 3d, temperature 103, pulse 130, respiration 60 and shallow, profoundly unconscious, complete paralysis of right arm and leg and left side of face, respiration and pulse grew more shallow and more rapid with temperature 108 and rising, when patient quietly died at 9:30 p. m. No post-mortem.

Remarks: Diagnosis of first case was leptomeningitis, resulting from abscess of middle ear.

Treatment: Symptomatic. Put in dark room, well-ventilated, 12 ounces of blood drawn from arm, kept quiet, pain and restlessness controlled by hypodermic injections of morphine combined with potash bromide in large doses per enema.

Diagnosis of second case cerebro spinal Meningitis with malarial complications.

Treatment: Put in dark room, kept quiet, sulphate of quinine per enema and sulphate of morphine hypodermically. Neither of the patients could take medicine per mouth. Sixty grains of quinine and $\frac{3}{4}$ of a grain of sulphate of morphine was given in twelve hours.

Diagnosis of third case cerebro spinal meningitis.

Treatment: Symptomatic, hypodermic injections of morphine with potash bromide when suffering and restless. The potash given in large doses per enema. There is a strong probability that quinine in the second patient had something to do with his recovery by contracting and giving tone to the blood vessels. I shall, should I have any more patients with meningitis, give the quinine again, in large doses, combined with morphine, until I am satisfied that the quinine is, or is not, beneficial. I could trace no contagion in either of the above cases. The last one of them had been at the college only twelve hours when he was taken. All those that assisted in the care and

handling of the sick have remained well; even the room-mates who slept in the same room with them after they were sick.

Influenza.—This disease had been among the students for several weeks and two of the patients had likely had it, but one of them, the second, had not. It will be noticed that all three of the patients in twenty-four hours after being taken grew unconscious.

First patient, consciousness returned in four hours and remained so for thirty-six hours. Second patient, consciousness returned in twelve hours and in thirty-six hours grew semi-conscious and remained in this state for twenty-four hours. Third patient, consciousness returned in twelve hours and remained for about twenty-four hours.

The two deaths took place on the fifth day and the one that recovered grew better on the fifth day. Herpes appeared on the first and third patients. Vomiting ceased in all three on the second day. Urine in all three had to be drawn off early in this trouble (in twenty-four hours) after first appearance of the disease. Tongue, in all three patients, red around edges and furred in center. Several times while patients were at their worst temperature would be normal. The exact agent that causes this fatal disease may be the "*Diplococcus Intracellularis Meningitidis*" found by Weichselbaum and Leichtenstern, which has been found in thirty-two out of thirty-five cases of cerebro spinal meningitis. Yet there may be some other organism that claims the honor of this center shot at the seat of reason of man and so profoundly dethrones all order and control, until life is extinct. It is to be hoped that in the near future the microscopist will be able to positively determine the cause of this dread destroyer.

WANTED—We will pay ten cents per copy for May numbers of 1898. Those having such copies and not desiring them will confer a great favor upon us by selling them to us.

Correspondence.

AMERICAN MEDICAL ASSOCIATION.

PHILADELPHIA, June 30, 1898.

DEAR SIR: At the recent meeting of this Association the following was unanimously adopted:

Whereas, The American Medical Association did, at Detroit, in 1892, unanimously resolve to demand of all medical colleges of the United States the adoption and observance of a standard of requirements of all candidates for the degree of Doctor of Medicine which should in no manner fall below the minimum standard of the Association of American Medical Colleges; and

Whereas, This demand was sent officially by the permanent secretary to the deans of every medical college in the United States, and to every medical journal in the United States, now therefore, the American Medical Association gives notice that hereafter no professor or other teacher in, nor any graduate of, any medical college in the United States, which shall, after January 1, 1899, confer the degree of Doctor of Medicine or receive such degree on any conditions below the published standard of the Association of American Medical Colleges, be allowed to register as either delegate or permanent member of this association.

Resolved, That the permanent secretary shall within 30 days after this meeting send a certified copy of these resolutions to the dean of each medical college in the United States, and to each medical journal in the United States.

Respectfully yours, WM. B. ATKINSON,
Permanent Secretary American Medical Association.

NEW ORLEANS POLYCLINIC.—Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, particularly laboratory work. *The twelfth annual session opens November 24th, 1898.* For further information address New Orleans Polyclinic, P. O. Box 797, New Orleans, La. s to ap

Editorial.

H. M. FOLKES, M. D., BILOXI, MISSISSIPPI,

Editor and Business Manager.

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SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

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 E. A. ROWAN, M. D..... Wesson

AMONG the original articles in this issue is one by Dr. W. A. Evans, formerly of this State but now of Chicago, in which is brought out in a most striking manner the extent and virulence of tuberculosis. Attention is particularly called to this because

we in this State are so slow to take advantage of opportunities presented us whereby we could secure reliable statistics along all lines appertaining to our profession, but because of apathy or something worse nothing is done until too late to remedy matters, when a great howl goes up from Dan to Beersheba. At the last session of the legislature a bill was passed establishing a department of public health and making ample provision for its organization and successful working. For some reason the matter has remained in statu quo and we are as far off as ever from being in a position to make a showing for our State as to mortalities, longevities, birth records, etc. In connection with this, it is well at this time to call attention to a glaring evil, which in itself is productive of no little crime, and that is the burial of persons without proper certificates, be it from physician or coroner's jury. Abortion is on the increase as we advance (?) in civilization and it is astonishing how many women daily lose their lives from this most pernicious practice. And it is not alone confined to unmarried people either. Now this right along the line mentioned above as being productive of burials without proper certificates, for as a rule these poor devils are operated on by some dirty-fingered old mid-wife, and when death follows it is ascribed to some other cause and so the old murderess is left to go out and secure another victim. Unfortunately it is difficult to prove these things, especially when maudlin sentiment so blinds the judgment of reasonable men that they can believe that all these objections are schemes of the doctors to keep all medical practice for themselves. However, they will learn after a while and in the meantime it is our duty to see that the laws are so constructed and administered that a stop will be put to such practices. Those having the department of public health in charge will please put the machinery in motion so that we may have some reliable data for investigators.

* * *

FROM the newspapers we learn that Surgeon-General Sternberg has gone to Cuba to see for himself what can be done to prevent a devastation from yellow fever among our troops on the island. This action on his part is thoroughly commendable and in entire keeping with the man's whole career. We earn-

estly trust that steps will be taken and provision made for the outbreak when it does come, for come it will, because time is not sufficient to eradicate the disease before the next summer is upon them. However, there are many precautions which may be taken to avoid an extensive outbreak, and to gradually acclimate the men, so to speak. It were well to remember that as a rule yellow fever is acquired at night and if the men govern themselves accordingly, which by the way they won't do, they could escape for a long time possibly. We, in the South, demand that the Island of Cuba be put in complete sanitary condition before it is turned over to the Cubans and such guarantees be insisted upon that it shall be kept in that condition as to make it imperative that they be carried out. While the government is in this cleaning up business, we respectfully suggest that a glance in the direction of New Orleans would be duly appreciated by those who remember what a good cleaner was one Gen. Ben. Butler.

THE Association meets in April and there is every prospect for one of the largest and most successful meetings in the history of the organization. It is the duty of all the members to attend and contribute their pro rata to the success of the occasion. The past decade in medicine has been marked by many and far reaching advances and as this State has no educational facilities for medical men in the shape of colleges it becomes our bounden duty to see that the profession is not behind the times through up to date meetings of the Association, at which those who have been so fortunate as to have attended the centers of learning can enlighten their benighted brethren, should there be any, through not subscribing for a good journal.

IT is respectfully suggested to the chairman of the various sections that they urge upon those who contemplate the reading of papers the early sending in of same, thereby giving the chairmen an opportunity to name different members of the Association whose duty it was to open discussion on the several papers. By having this early knowledge of the subject selected, the one whose duty it will be to open discussion could have time to study the topic and thus be in a position to do more than merely endorse the paper read, thereby much enhancing the scientific

value of the meeting. In this connection it is the intention of The Journal to secure a stenographic report of all discussions and papers and present more to its readers than a few short words stating that Drs. So and So discussed the paper. In our opinion nothing fixes points in one's mind to a greater extent than carefully reading a good criticism or endorsement, after having been at the meeting and hearing all said on the subject.

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In the January issue of The Journal appeared an article on Malarial Hæmaturia, taken in toto from the *Memphis Lancet* and for which due credit was not given that journal. We hasten to apologize for the oversight, which occurred because the printer overlooked the penciled credit which had been added to the article in the *Lancet*, the journal being used as as and proof not read because of copy being in print. We trust that our esteemed contemporary will forgive this, our first *lapsus ethiesi*.

**

DR. JOHN GUITERAS has resigned as professor of pathology at the University of Pennsylvania to accept the chair of theory and practice at the University of Havana. While regretting to lose so valuable a man as Dr. Guiteras, we believe his sphere of usefulness will be much enhanced by the transfer, as he can and will inculcate in the minds of the Cuban student the very best of feelings toward the United States and thus do much to hasten the day of inevitable annexation.

**

DR. KALLOCH of the Marine Hospital Service succeeds Dr. A. C. Smith in charge of Gulf Quarantine Station. The Service is to be congratulated on having such a reliable and active man as Dr. Kalloch to place in charge of this most important work.

**

WE learn with great pleasure and at the same time regret that Surgeon Carter of the same service has been ordered to Cuba to take charge of the work of the service at Habana. We of the South feel more easy when we know that Dr. Carter is to put in operation the machinery which is expected to do such great things in protecting us from an invasion of fever. It is earnestly hoped that his assignment to Habana is merely temporary and that we will have him with us before the beginning of another summer.

Public Health.

THE SAME OLD STORY.—It will be remembered that last week Dr. W. B. Atkinson of the State Board of Health was sent to investigate the suspicious cases of skin disease epidemic throughout the town of Bradford, Pa., and the surrounding country. Dr. Atkinson is reported as finding a number of cases with symptoms so manifest that he at once reported them as smallpox. This diagnosis seemed to startle a good many of the practitioners in Bradford, and they had no hesitancy in stating that the diagnosis was incorrect. A public meeting was called and rousing resolutions adopted setting forth the opinion that smallpox was not epidemic in the locality. However, smallpox has continued to spread throughout the city, and on December 11 twenty cases were reported. Dr. Benjamin Lee, secretary of the State Board of Health, also visited the place and concurred in the diagnosis as expressed by Dr. Atkinson.—*Philadelphia Cor. Jour. Am. Med. Ass'n.*

A NOTE OF WARNING.—From the subjoined report it is evident that the M. H. S. is wisely taking a stand against criminal carelessness on the part of ignorant and self-sufficient officers of Uncle Sam who wilfully disregard all sanitary precautions. It now behooves all quarantine officials to heed the warning note of Dr. Brunner and be fully on the alert.

Habana, Cuba, December 16, 1898.—Sir: The following report for the week ended Thursday, December 15, is respectfully submitted: While the deaths from all causes are but a tenth less than that of the preceding week, still there is a marked decrease in the deaths from all preventable diseases. This is due to the influence of two northerners, one following the other, decreasing the temperature and causing cool weather for eight to ten consecutive days. Two deaths were caused by yellow fever. One death is said to have occurred at Marianao, a village about 10 miles from Habana, and near which town the American troops will be encamped. American troops are being landed almost daily here. The vessels bringing these troops disembark them at San Jose wharf, which is on the Habana side

of the harbor, and almost in every instance these vessels with the troops remain twenty-four hours at said wharf. San Jose wharf lies to the northward of Tallapiedra, the navy-yard intervening; it is without doubt infected. The piers at which these transports lie have always been used by Spanish steamers plying between ports in Spain and Habana. The warehouses immediately connected with these wharves have never been occupied by Spanish troops, but those lying to the southward, and which are now being used for the storing of commissary supplies by our government are said to have been so used at one time. To land quartermaster supplies at this wharf is a dangerous undertaking, particularly broken packages, and this will occur in every cargo brought here. Two transports, *Minnewaska* and *Roumanian*, carrying medical officers of the United States Marine-Hospital Service, have disembarked their troops and discharged their cargoes at this wharf, remaining there over night under protest of these officers. In issuing bills of health for all such vessels, I have stated that the wharf was infected and that not only troops had left the vessels and returned to them after going ashore but some of the crew had done the same thing. I believe that all such vessels going to ports in the Southern States should be disinfected at ports of arrival. One case of yellow fever has developed on the American schooner *James Slater*, which vessel discharged her cargo of lumber at Tallapiedra wharf. This vessel, which sails for *Pascagoula*, will stop at the *Tortugas Quarantine Station*. Very respectfully, W. F. BRUNNER, Sanitary Inspector, U. S. M. H. S., the Supervising Surgeon-General, U. S. Marine-Hospital Service.

* * *

SANITATION IN TUBERCULOSIS—The above title is one recently treated by Dr. Luther M. Halsey of Williamstown, N. J. Dr. Halsey refers to an editorial in the *Journal of the American Medical Association*, in which statistics were given from twenty of our principal cities with a population of 7,500,000, showing that there has been a decrease of the death-rate from tuberculosis amounting to 33 per cent. since 1888, which has been ascribed to the more general knowledge concerning this disease. The paper shows that since 1838 the number of deaths from smallpox has been reduced 95 per cent., and typhoid fever 60

per cent. Since 1860 scarlet fever shows a decrease of 81 per cent. and tuberculosis a decrease of 46 per cent. "The general effect of improvement of sanitation is that 600,000 persons reach the age of 21 years who sixty years ago would have died." Regarding the prevention of tuberculosis, the writer advocates the adoption of sanitary laws by boards of health of different States, the destruction of sputa from those infected, the regulation of schoolhouses and the establishment of hospitals for the proper care and treatment of consumptives.—*Jour. Am. Med. Ass'n.*

* * *

TRICHINOSIS.—Cases of this severe and often fatal disease have recently been reported at Croton, Ohio. All the members of one family, seven in number, were more or less afflicted. A specimen of the meat (from a hog) suspected to have caused the disease was examined in the laboratory of the State Board of Health, and the parasites—trichinæ—were found.

The physician who attended the cases, reported that the farmer who furnished the meat, in taking in his corn from the field, had killed a number of rats. These he gave to his hogs to eat. Rats are very frequently affected with trichinosis, and there is great probability that the hogs became affected from eating the rats. This should be a warning to all persons raising hogs.

It is well for the public to bear in mind that thorough cooking of the meat containing these parasites will effectually destroy them.

Another case of trichinosis was also recently reported in another village, the victim being the wife of a grocery-keeper.

In this case, the disease seems to have been contracted from eating uncooked ham, the woman, who was frequently in the store, was in the habit of eating small bits of uncooked ham which her husband was offering for sale. The particular ham that caused the trouble, could not be located. There were no cases in the community, and it is probable that those who ate of the infested ham escaped disease by thoroughly cooking it.

Still another family, in another locality, has just been reported as probable victims of trichinosis. The sausage suspected to have caused the disease will be examined in the board's laboratory. Later—Trichinæ were found in a sample of meat—pork—eaten by this family. In a family of ten, all were affected.

Medical News and Miscellany.

It is with much pleasure that we note the extremely complimentary expressions used by Medical Inspector Woodson in referring to Dr. O. W. Stone of our State, who is now in Gibara engaged in the disagreeable task of eradicating small-pox from the city.

Dr. John Wesley Price was married to Miss Hettie Williams in Booneville on December 22d last. Congratulations cordially extended.

Dr. B. D. Watkins of Natchez was married to Miss Gertrude Fort of New Orleans, on the 11th inst., at Christ Church chapel in New Orleans. They immediately left for an extended trip North. Our best wishes are extended.

BEHRING VS. CALMETTE.—Dr. Calmette, Pasteur's well-known pupil, who was recently appointed as chief organizer of the Pasteur Institute at Lille, and who has won much fame by his researches into the question of immunity for serpent venom, has made another discovery of a more purely commercial nature. By this discovery he was enabled to manufacture alcohol very much purer and stronger than is usual at a distillery and at the same time much more cheaply. He sold his secret to a large factory near Lille and very soon realized the handsome sum of 250,000 francs. This he has handed over absolutely to the Pasteur Institute, over which he presides, although he is not personally a wealthy man. This act of munificence, which has been noticed solely by the medical press and ignored by the political journals, is considered as a protest against the recent action of Dr. Behring.—*Lancet*, Nov. 5, 1898. *Journal American Medical Association*.

RESOLUTIONS ON THE DEATH OF DR. JOHN B. HAMILTON.—At a meeting of the Board of Trustees of the American Medical Association, held in Chicago, Jan. 2, 1899, Dr. A. Garcelon, president of the Board, appointed a committee which drafted the following resolutions:

Whereas, in the wisdom of Divine Providence our worthy secretary and editor, Dr. John B. Hamilton, a loyal friend, a

devout Christian, a great man, has in the prime of his manhood been called from his earthly labors to eternal rest, therefore, be it

Resolved, That the trustees of the American Medical Association desire to express their deep appreciation of a faithful servant, one whose untiring energies in the interests of their Journal have received the recognition of the medical profession of the world.

Resolved, That while his business capacity has been exemplified in all the undertakings of his life, and success had crowned his every effort, notably as a sanitarian, a surgeon, and a surgeon, and a surgical teacher, yet, above all, the position to which the Journal of the American Medical Association has attained through his efforts marked him as being possessed of superior executive ability and rare editorial genius.

Why weep for him? For him the angels came;
Ere yet his eye with age grew dim, or bent the stalwart frame;
His weapons still were bright, his shield was lifted high
To slay the wrong, to save the right—what happier time to die?

E. E. MONTGOMERY, }
JOSEPH EASTMAN, } Committee.
H. L. E. JOHNSTON, }

Dr. Cameron Piggott, professor of chemistry at the University of the South, with his wife and son are spending the winter in Biloxi.

UPBRAIDING THE DOCTOR.—Dr. Samuel Wolf, physician to the Philadelphia hospital, and neurologist to the Samaritan hospital of Philadelphia, presents among other a case which is of special value at this time. He says: "A man of 42, in the course of an attack of lagrippe, was enduring extreme torture from the pain of a trigeminal neuralgia. The second ten grain dose of antikamnia gave such complete and permanent relief, that my patient, a druggist of large experience, upbraidingly asked me, "Why didn't you prescribe this remedy before?"

Dr. B. N. Ward, formerly from Carthage, and orator of the Association in April 1897, has moved to Helena, Ark., and is associated with Dr. C. R. Shinault.

Dr. R. L. Turner, formerly of Ellisville and major surgeon in the 2d Mississippi Volunteers has moved to Meridian.

The Gulf Coast Medical and Surgical Society meets in Gulfport on February 8, in the afternoon and evening.

All members of the Association wishing to pay their dues or who are in arrears to the Association can send the money to Dr. C. H. Trotter, Bogue Chitto, assistant secretary.

Sample of ecthol was received and at time of receiving had good case to use it. Miss —— had misfortune to run hedge thorn one inch long in leg above ankle. It remained in one week when she was brought to office to have it extracted. Was successful in removing thorn but it being a dead one pieces of bark remained in wound. Disinfected wound with bi-chloride, bound it up and sent patient home. Was summoned in two days and found limb inflamed to groin, swollen and very painful. Removed bandage which was followed by small quantity of pus. Re-applied dressing. That night bottle of ecthol was received, visited patient next day, and put her on ecthol, teaspoonful six times a day, and injected medicine in the wound and applied cloth saturated with same. In four days pain, swelling and inflammation gone, wound healing and patient able to do her work.

A. L. STIERS, M. D., Dawson, Neb.

A DESIRABLE ANTISEPTIC.—As a deodorant and antiseptic for the sick room and for the dentist's office, listerine stands pre-eminent. While it is equal to any and superior to most of the agents commonly used under such circumstances, it adds an agreeable aroma instead of an offensive odor to the surroundings; and is particularly well-adapted to the lying-in-room. It may be freely used in spray or lotion without stain or irritation as an agreeable and effectual detergent. It is also specially commendable in weak solution as a mouth-wash and gargle for aphthous sores or a fungus condition of the gums, and bad breath; and for certain forms of indigestion—those accompanied by disagreeable eructations—a few drops of listerine in water is a particularly grateful and excellent remedy. Moreover, according to a series of "Experiments Upon the Strength of Antiseptics," by Dr. A. T. Cabot (Boston Medical and Surgical Journal), listerine compares favorably with the most reliable agents for the rapid destruction of micro-organisms.—*The Sanitarian*.

A BULLET IN THE HEART FOR THIRTY-SEVEN YEARS.—Dr. O. B. Beer, writing to the Cincinnati Lancet-Clinic for November 19th, says that not long ago Dr. G. O. Brown and himself

held an autopsy on an old soldier who had been wounded by "bushwhackers" during 1861. The wound was made by a small rifle ball of the kind used in the muzzle loading rifles. It had entered the thorax posteriorly on the left side, between the second and third ribs, and had ranged downward and inward, passing through the left lung and pericardium, and had imbedded itself in the wall of the heart near the lower part of the left ventricle. There had never been any disturbance of the heart in any way, and it seemed to be perfectly normal. The man had, after recovering from the effects of his wound, served till the close of the war and had been a farm laborer since. Cancer of the arm was the cause of his death. The doctor has the heart with the ball in it as found.—*N. Y. Medical Journal*.

A memorial to Dr. John Blair Gibbs, in the form of a tablet, was unveiled at Rutgers College, New Brunswick, N. J., November 10, 1898. Dr. Gibbs, who was serving with the marine corps at Guantanamo, it will be remembered was first medical officer killed in action during the war with Spain. The tablet was presented by Professor Robert W. Prentice, of Rutgers, a classmate of Dr. Gibbs, on behalf of the class of '78, which erected the tablet, and the principal address was most appropriately made by Surgeon General William Van Reypen, United States navy. The death of Dr. Gibbs has been further commemorated by naming the hospital at Camp Hamilton, Lexington, Ky., the John Blair Gibbs hospital. The trustees of Mount Lebanon hospital at New York have also erected a tablet to his memory.—*Buffalo Medical Journal*.

THE GALLANT SURGEON OF THE YANKEE.—Dr. McGowan's medical friends recently presented him with a beautiful loving cup. It was on Thanksgiving eve that a number of distinguished doctors of New York gathered in the banquet hall of the Hotel de Logerot to honor their comrade who had recently returned after his cruise with the naval reserves in Cuban waters. These eminent physicians saw fit to welcome home their brother and friend, and to make the occasion one that should outlive the night. Their esteem took substantial form, and an exquisite specimen of the silversmith's art was made the token of the high regard for Dr. McGowan. This cup was designed and made by the Gorham Manufacturing Company, and

reflects great credit upon the handiwork of the company's artists. Many classic speeches were made during the evening, but especially the scholarly address of Dr. John Aspell was in great harmony with the object, aim and purpose of the gathering. The night will long be remembered in medical circles, and especially in the heart of the worthy recipient of the cup, Dr. John P. McGowan, of the New York naval reserves.—*N. Y. Medical Journal*.

A FATAL CASE OF GONORRHEA.—Ghon and Schlagenhauser (*Weiner klinische Wochenschrift*, 1898, No. 24; *Journal des co. naissances medicales*, September 1st; *Bulletin of the Pasteur Institute*, October) report the case of a girl who entered the hospital after having suffered for a month with pains in the limbs, accompanied by symptoms of influenza; four days before entering the hospital she was seized with chills, which were still present at the time of her admission. Examination showed that she was affected with acute blennorrhagia and Bartholinitis. She had intermittent febrile attacks; about the sixth day pain suddenly appeared in the right foot, which became cold and bluish, while sensitiveness was diminished in the whole limb. This lesion grew worse and five days later the foot was the seat of gangrene. The cardiac sounds, at first muffled, became more distinct, and a systolic murmur was heard at the base, on the left of the sternum. The patient's condition became very bad and death promptly occurred.

At the autopsy, the following lesions were observed: An ulcerative endocarditis of the aortic valves, with abscesses in the substance of the myocardium; hypertrophy and dilatation of the heart. The gangrene of the foot and leg was caused by embolism of the femoral artery. There was a focus of suppuration in the peritoneal covering of the posterior surface of the uterus. The gonococcic process had invaded the urethra, the vagina, and the cervix. The liver was the seat of parenchymatous degeneration; there were myocarditis and pulmonary œdema. Gonococci were found in the cardiac lesions; this proved the gonococci nature of the endocarditis. The authors noted the absence of splenomegalia and septic emboli, which usually accompany infectious endocarditis.

The gonococcus was isolated and cultivated; it could not be found in the embolus of the femoral artery, but was present in large numbers in the retro-uterine abscess.

The urethral canal exhibited numerous small, very vascular vegetations, developed at the expense of the connective tissue underlying the epithelium, which vegetations are often met with in subacute and chronic gonorrhœa.

The authors could not find the channel of entrance of the pathogenic microbe into the circulation.—*N. Y. Medical Journal*.

Abstracts and Extracts.

TAXIS AND MODE OF INCISION IN STRANGULATED FEMORAL HERNIA.—In strangulated femoral hernia the direction laid down by the older authors as to the mode of applying taxis counts for positively nothing; nay, they are worse than useless, for their employment implies that manipulation is reasonably safe and certain, while experience disproves both; and more, by this unsurgical procedure the intestine is often irretrievably damaged beyond repair by the crushing and tearing of the fingers. In former times the rules for incising and dividing the seat of strangulation were laid down with great fulness, and a special probe-pointed bistoury was devised for the blind groping in the dark. The operator always had a terrible dread of hemorrhage. My own experience with this and all other types of strangulation emphatically induces me to advise the rejection of protracted taxis, baths and antispasmodics. The use of pulmonary anæsthetics in taxis should be strictly proscribed. Let us always cut from the outside in, and then if we divide one or more small vessels, close them, as we would in any other operation. But let us invariably open the sac, freely divide all constriction, draw down and thoroughly free the intestines before we reduce it.—*T. H. Manley, M. D., in Med. Times and Register*.

* * *

COCAINE TO RELAX RIGID OS UTERI.—Dr. J. Farrar reported some cases to the last session of the British Medical Association to call attention to a rapid method of overcoming a rigid os uteri in labor. It consists in the application of a ten per cent. solution of the hydrochlorate of cocaine on a piece of rag—smearing the os round and round—first on the outside, and

then within—finally leaving the rag within the margin of the os. At the end of about four minutes, the os not only loses its rigidity, but is wide open, and as flexible and distensible as a rubber bag. The doctor had had opportunity to test the use of cocaine in only five cases of rigid os in labor before publishing his report; but in each of the five cases the ten per cent. solution of cocaine acted with equal success. This is “a good obstetric wrinkle.”—*Va. Medical Semi-Monthly*.

WINKLER'S TEST FOR FREE HYDROCHLORIC ACID IN THE STOMACH CONTENTS.—(*Centbl. f. inn. Med.*; *Ref. O. Med. Jour.*, 1898, IX., No. 10, p. 239.)

A small quantity of the normal filtered stomach contents, to which a few grains of dextrose has been added, is poured out on a clean porcelain plate; add a few drops of a solution of alpha-naphthol, and heat gently. A violet-blue color is developed, which rapidly changes to inkish black. Or a standard test solution may be kept on hand, made by adding $\frac{1}{2}$ to a five per cent. alcoholic solution of naphthol a one-half to one per cent. solution of grape-sugar. As in the Gunzburg and the Boas tests, so also in this one there is a negative reaction if, instead of free hydrochloric acid, sulphuric or phosphoric acid is present.—*N. Y. Post-Graduate*.

TO INCREASE THE POWER OF TRIONAL.—Habermann (*Centbl. f. inn. Med.*, September 17th; *Medical News*, December 3d) administers trional in carbonated water, which, by reason of the carbon dioxide contained in it, dissolves the drug and conceals its taste. It also hastens its action so that the patients often fall asleep within ten minutes after drinking the half or the quarter of a twelve-ounce bottle containing only fifteen grains of the drug. With such a small dose the patient sleeps eight hours and awakes without feeling tired and without headache.—*N. Y. Medical Journal*.

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Original Articles.

The Relation of Chemistry to Practical Medicine, and Some of the Methods Available in the Daily Work of Physicians.

By R. H. CHITTENDEN, PH. D., PROFESSOR OF PHYSIOLOGICAL CHEMISTRY IN YALE UNIVERSITY.

In opening this discussion on the relation of chemistry to practical medicine, I am forcibly reminded of the fact that twenty years ago, even, it would have seemed a thankless task to attempt the presentation of a subject like the present one to an audience of practitioners, so little apparent bearing had chemistry at that time upon the questions of practical medicine. Then, physiological chemistry had only commenced to occupy its proper place in the scheme of medical studies. The first independent laboratory or institute of physiological chemistry had just been established in the reconstruction of Strassburg University under German *regime*, and the upholders of scientific medicine were only beginning to realize the immense possibilities which so-called physiological and pathological chemistry possessed for helping on the advance of scientific research in the medical sciences.

Scientific investigators and practitioners alike, I have no doubt, realize fully that advance in scientific medicine brings in

due time a corresponding advance in our knowledge of the causation and treatment of disease. Every new fact which the laboratory worker in physiological chemistry, for example, brings to light will in due time contribute something to that fund of knowledge which is of direct use, and hence of practical value, to the everyday practitioner of medicine. The record of the last twenty years is full of illustrations of the general truth of this statement. Further, what a *widespread* advance in the application of chemistry to physiology and pathology these last twenty years have witnessed! Look today through the various journals of physiology, physiological chemistry, pathology, pharmacology, experimental and clinical medicine, and note the character and the work there presented and the part which chemistry is playing in the hands of both the scientific worker and the clinician. I believe it is no exaggeration to say that the most important advances in scientific medicine for the *next* twenty years will be along chemical lines, made possible through the application of chemical methods of research. I base this belief upon the close relation which chemistry today plainly bears to so many of the fundamental problems occupying the medical mind. What, for example, is our attitude at the present moment regarding that large class of infectious diseases whose origin is to be traced to certain specific micro-organisms? We know for a certainty that the micro-organisms are not directly responsible for the ills which they produce. The characteristic symptoms of this and that stage of the disease are but the outward manifestations of the physiological action of specific chemical substances (toxines, if you choose) produced by the growth and multiplication of the micro-organism within the tissues of the body. Can there be any doubt of the truth of this assertion? In true diphtheria, for example, we are well aware that the cause of the disease is the Löffler bacillus, but this germ is found only at the seat of inoculation, whereas the disease is characterized by a series of systemic disturbances most marked in character. These, as Löffler himself pointed out in 1889, must be due to soluble products, and, as you are well aware, we now know, thanks to the supplementary work of Brieger, Frankel, Roux and Yersin, Behring, Ehrlich, and others, that the diphtheria bacillus produces a soluble poisonous substance of a proteid nature, readily separable from the bacteria, and that this substance

of a proteid nature, readily separable from the bacteria, and that this substance when injected produces the characteristic symptoms of diphtheria, followed by death. But combined chemical and physiological study has advanced our knowledge still further, and made possible the production of a diphtheria antitoxine which has already proved of inestimable value in the hands of the clinicians. The antitoxic serum owes its antidotal action to chemical substances, and whether the immunizing effect is the result of a direct chemical neutralization—*i. e.*, a direct union between the toxine and antitoxine—or whether the process involved is a more indirect and complicated one, in no way alters the general trend of our argument that in the manifold results obtained from the chemico-bacteriological study of this typical disease we have a forcible illustration of the part which chemistry is playing in unraveling the mystery surrounding infectious diseases in general, and in providing the practitioner with the means of combating them. I can not refrain at this point from calling your attention to a fact which I think has an important bearing upon some of the theories advanced by Ehrlich in connection with diphtheria toxine and antitoxine, and perhaps has a wide bearing. As has been clearly pointed out by Park and Atkinson,* in a recent paper embodying work carried out in the research laboratory of the health department of New York city, it is now generally assumed on the "strength of Ehrlich's researches that the diphtheria toxine is a single definite chemical compound with definite physiological and antitoxic properties only at its origin; that in reality it is an unstable substance readily losing its toxicity, while at the same time its affinity for antitoxine may be either increased or decreased. Certain it is that there are great variations in the neutralizing value of a fatal dose in different toxins, and there are many observations which tend to prove the readiness of the toxine to undergo deterioration, due possibly to its breaking down into related bodies of less toxicity. However this may be, chemical study has shown quite clearly that the growth of micro-organisms, both pathogenic and non-pathogenic, in suitable culture media is attended by the development of proteolytic enzymes which are, in part at least, responsible for the soluble proteid products which result. For it is true that whenever micro-

*Journal of Experimental Medicine, 1898, vol. iii, p. 513.

organisms grow, the most prominent of the soluble products which result are albumoses or proteoses akin to those formed by the proteolytic enzymes of the digestive juices. These latter products, which are normal to the digestive tract, are, as you know, quite toxic when introduced into the blood current, causing fever, fall of blood pressure, narcotism, and even death. Further, as you are aware, when these soluble products of digestion are introduced into the blood current they are rapidly eliminated through the kidneys, just as other poisons are. In a similar manner, the albumoses which are absorbed from pus cavities, etc., are eliminated through the urine, giving rise to a typical "albumosuria." But the point which I wish to emphasize is this—viz., that in the decomposition of proteids by an ordinary digestive enzyme we have to deal with a progressive hydrolytic cleavage, in which the first formed products (primary proteoses) are transformed into secondary products (secondary proteoses), and these finally into true peptones. Now, these several classes of substances differ from each other physiologically as well as chemically, the primary products, as a rule, being much more active physiologically than the secondary products. Is it not, therefore, quite probable that in the zymolysis produced by many pathogenic micro-organisms we have to do with a corresponding hydrolytic cleavage, with consequent formation of a row of more or less toxic substances, the one formed from the other by successive hydration and accompanied by corresponding changes in toxicity or physiological power? There are many facts which might be cited in support of such a view, but I would merely call attention here to the general drift of the argument, which I think offers a partial explanation at least of the variability in toxins noticed at different stages of development and helps make clear why deterioration may occur. I would have you take these statements, however, mainly as an illustration of the general principle that all pathogenic bacteria produce a row of chemical substances endowed with more or less toxic power, and that these are chiefly responsible for the characteristic symptoms of the disease. Hence, in these chemical facts we have the key to the true cause of the disease, and are afforded thereby a clear insight into rational methods of prevention and treatment. Pneumonia, malignant œdema, glanders, cholera, typhoid fever, summer diarrhœa, suppuration, tubercu-

lois, tetanus, anthrax, etc., are all illustrations of infectious diseases in which more or less well-defined chemical substances are the true poisons. Moreover, there is hardly any doubt that in malarial fevers the true cause of the paroxysms is to be sought for in chemical substances elaborated through the action of the malarial parasites and distributed by the blood.

Another direction in which physiological chemistry has been bringing to light interesting and important fact of direct value to practical medicine is in connection with the internal secretions. Here we have a new and interesting chapter of scientific research, full of interest and suggestion for both physiology and practical medicine. The literature of the last two or three years bearing upon this subject is enormous, but running through it all is clear evidence of the existence of a row of chemical substances elaborated by the several ductless glands, of inestimable value to the organism, exercising in some cases, as in the secretion from the thyroid, a controlling influence over the nutritional processes of the body, either counteracting or more likely preventing the formation of toxic substances of great power. No sooner had experimental physiology shown that extirpation of the thyreoidal tissue in animals was followed by a train of peculiar symptoms, leading in many cases to death, and that the feeding of thyreoidal tissue in animals so operated upon was followed by a train of peculiar symptoms, leading in many cases to death, and that the feeding of thyreoidal tissue to animals so operated upon was sufficient many times to overcome the baleful influence of the removal of the glands, than the aid of chemistry was sought to explain these peculiar results. Today, thanks especially to the pioneer work of Baumann and Roos, and to the more recent work of Hutchinson, we are able to obtain from thyreoidal tissue a specific substance—the iodothyryn of Baumann or the colloid of Hutchinson—characterized by containing iodine and endowed with marked physiological properties. Upon these chemical substances apparently depends such remedial action as the feeding of thyroids produces in myxœdema, parenchymatous goitre, cretinism, etc. In the suprarenals the chemical work done by Professor Abel* has afforded evidence of the presence of a peculiar basic substance, a pyridine base or alkaloid, upon which the well-known blood-pressure-raising power of

*Abel and Crawford. Johns Hopkins Hospital Bulletin, July, 1897.

the gland depends; while in the hypophysis cerebri, ovaries, testicles, etc., we are gradually acquiring knowledge of the existence of internal secretions likewise characterized by the presence of chemical substances of undoubted physiological power. Chemical research alone can show the exact nature of the substances which these physiologically active glands produce, and chemical methods must be relied upon to further our knowledge of these all-important bodies, which promise so much for practical medicine.

Of greater practical value to the physician in his every day work is the chemical study of food, urine, and fæces in their bearing upon the general problem of nutrition. I refer here not to the simple testing of urine for possible pathological constituents, nor to microscopic examination of fæces for the presence of undigested food particles, but to the quantitative analysis of the urine and fæces, as well as of the food, with a view to ascertaining the true nutritive value of the latter, and the extent of proteid and other forms of metabolism, thus obtaining data which I am sure would prove of inestimable value in many questionable cases and afford a basis for accurate diagnosis. I am aware that the physician in general practice is considered as too busy a man to find opportunity for elaborate chemical examination of the urine, to say nothing of the fæces, sputum, gastric contents, etc., but I question very much if the time has not arrived when the physician must make use of this important aid in diagnosis. As Simon has well said in his excellent book on clinical diagnosis, "The time is at hand when the practice of medicine is becoming what it was long ago, but then unjustly, called, a true science and art. No continuing success can be built on empiricism or upon the proportion of guess-work which is inseparable from dependence upon the 'experienced eye.' Diagnosis is now the password in medical science.... It is inconceivable that a physician can rationally diagnose and treat diseases of the stomach, intestines, kidneys, and liver, etc., without laboratory facilities." A knowledge of chemistry sufficient for clinical purposes is just as important aid, even in our larger hospitals! There are, it is true, some notable exceptions, but, as a rule, chemical diagnosis is kept within very narrow limits.

There is today no subject of greater moment in preventive medicine than the subject of nutrition, and it is of equal moment

for the growing infant and the young mother, the patient with a wasting disease and the sufferer from some acute trouble. For all alike the same problem presents itself, and there is need of concise knowledge concerning the true character and dynamic value of the ingested food and the extent to which it is utilized by the body, both qualitatively and quantitatively. How little thought is given to the exact nature and composition of the food consumed by the patient! The very fact that our markets are flooded with food preparations, many of unknown composition and of questionable value, is in itself a sufficient commentary upon this point. Do you believe if every physician had the power to analyze these preparations, or to fully understand the import of analyses made by other persons, that so many of these compounds would flourish? I think not. But the time will come sooner or later when as much thought will be given to the exact composition of the ingested foods and to the extent of their utilization by the body as is now given to the remedies prescribed. That the time has not already arrived is to me inexplicable. There is far more attention given in the United States to-day to the nutritive value of the foods fed to our domestic animals than is expended on the food of mankind. The intelligent farmer, by the wisdom of a paternal government, is enabled through the various state experiment stations to obtain accurate and concise information of the composition of the rations he may desire to feed his stock. The experiment stations are continually furnishing gratuitous information regarding the digestibility, nutritive value, etc., of this and that ration. The farmer can not go astray, for the agricultural department at Washington will see that he obtains reliable information of any form bearing upon the nutrition of his stock. Why should not some similar system prevail in regard to the food of man? Why should not the physician demand a similar privilege in regulating the diet of his patient? It is not such a difficult matter. The chief problem centres around the proteid or albuminous foods, and to ascertain these requires only a determination of nitrogen.

To be sure, in careful work it is necessary to distinguish between the nitrogen of proteids and that of the simpler amids or amido-acids, but we now have, thanks to Professor Mallet* and

*Bulletin No. 54, U. S. Department of Agriculture, Division of Chemistry.

Dr. Wiley, methods which promise to accomplish this with comparative ease. As to the determination of the nitrogen, the simple Kjeldahl method is readily applicable and yields results of great accuracy. The same method of analysis applied to the twenty-four hours' urine and to the fæces gives all the data necessary for comparing the income and output of proteid matter; tells us at a glance how far the proteid food is being utilized; whether it is sufficient for the needs of the body; whether digestion is proceeding at a normal pace, etc. Further, chemical analysis of the fæces will throw much light upon the utilization of fat by the body, and thus upon possible abnormalities of the pancreatic juice and bile. Such helps as these to accurate diagnosis and in the careful watching of the patient's condition can not be ignored, and sooner or later will demand the attention of the conscientious practitioner.

Again, there is much to be learned in studying the different forms in which the nitrogenous waste of the body is eliminated through the urine. To be sure, the greater proportion of the proteid matter decomposed within the body is thrown off as urea, but, as you are well aware, a certain amount of nitrogen is excreted in other forms—notably as uric acid, alloxuric bases, preformed ammonia, etc. These have their own significance, and their determination by suitable methods may yield results of practical value to the physician. But they must be determined, not guessed at. Quite frequently the impression prevails that an undue production of uric acid is going on because the urine deposits crystals of this substance; but such a conclusion is oftentimes erroneous, since crystallization of the acid from urine is dependent mainly upon the reaction and concentration of the fluid and without any necessary connection with the amount actually formed. The only way to ascertain with any accuracy whether the acid is being excreted in large or small quantity is to make a quantitative determination. This may be done by the comparatively simple Hopkins method,* the results being quite accurate; certainly, sufficiently so for clinical purposes.

It is to be remembered that the normal ratio between uric acid and urea is 1:50 or 1:60, the proportion of uric acid, however, varying considerably with variations in the diet. The val-

*The Journal of Pathology and Bacteriology, 1893.

idity of this latter statement is well illustrated by some very carefully conducted experiments recently recorded by Jerome.† As you are doubtless aware, the view one time held that the formation of uric acid is due to an arrest of the process of oxidation of proteid matter which, if completed, would go on to the formation of urea, is no longer tenable. Uric acid has an origin quite independent of urea, plainly coming from a different source, as suggested originally by Horbaczewski. As Kossel pointed out some years ago, true nuclein is especially characterized by yielding on decomposition a row of xanthin bases, such as xanthin, hypoxanthin, adenin, guanin, etc., all of which contain an alloxan group and a urea group; hence the more modern name of alloxuric bases suggested by Kossel and Kruger. Now, uric acid is likewise an alloxuric body, containing an alloxan and a urea group, and one might naturally infer a genetic relationship between the alloxuric bases and uric acid, either direct or indirect. Experiments in this direction have led to somewhat conflicting results, but this much seems certain—viz., that the feeding of nuclein-containing foods tends to increase very markedly the output of uric acid. Thus, Jerome‡ finds that feeding thymus glands, which, as you know, are rich in nuclein, increases very greatly the production of uric acid; and a long series of feeding experiments made on himself “teaches that the daily output of uric acid is so easily, so surely, and so largely controlled by the use of suitable articles of diet as to make it highly probable that the variations in the amount of uric acid excreted in health from day to day are chiefly due to the larger or smaller quantity of alloxur-holding bodies absorbed from the food.”* Further, we are led to believe that the continued excretion of uric acid during prolonged fasting is due, mainly at least, to catabolism of the nuclein-holding cells of the organism. In conformity with this statement recent workers|| on the influence of muscular work on metabolism consider that a rise in the excre-

†The Formation of Uric Acid in Man, and the Influence of Diet on its Daily Output. *Journal of Physiology*, 1897, vol. xxii, p. 146.

‡Jerome. *Loc. cit.*

*Jerome. *Loc. cit.*

||Dunlop, Paton, Stockman, and Maccadam. On the Influence of Muscular Exercise, Sweating and Massage on the Metabolism. *Journal of Physiology*, 1897, vol. xxii, p. 68.—Garratt. On the Sequence of Certain Changes in the Urine Produced by Exercise and by Turkish Bath. *Ibid.*, 1898, vol. xxiii, p. 150.

tion of uric acid denotes nuclear destruction outside the muscles and signified want of training. In this same connection the data obtained in the study of leucæmia are interesting, since they show that the great increase in the excretion of uric acid there observed is undoubtedly associated with the destruction of leucocytes rich in nuclein. Doubtless, the increased excretion of uric acid in febrile diseases is likewise associated with the breaking down of nuclear material.

The alloxuric and xanthin bases normally present in the urine are worthy of considerable attention, as they may have special significance when present in undue amount, but the subject has, as yet, hardly reached a stage where it can be given much clinical attention. The amount of nitrogen eliminated in this form can be approximately determined by the Kruger-Wolff method,* but the values are not strictly accurate.† A more reliable process is the silver method devised by Salkowski.‡

For the determination of urea in the urine the method almost universally used for clinical purposes is the hypobromite method originally proposed by Hufner, and you are doubtless all familiar with Hufner's, Marshall's Green's, or some other form of urometer. It is to be remembered, however, that sodium hypobromite decomposes not only urea, but also the other nitrogenous constituents of the urine, in some degree at least, and that consequently the nitrogen collected and measured is not traceable wholly to urea. For clinical purposes, however, this error is not prohibitive, since the object in view is mainly the determination of the nitrogenous waste, of which urea is the chief. It would be helpful, however, and possibly instructive, if we had a series of comparative observations on a large number of pathological urines (free from proteid matter) in which the total nitrogen was determined by the Kjeldahl method and the urea (so called) by the hypobromite method.

Finally, we have in the urine as a normal constituent a nitrogenous base called creatinin, which is deserving of some attention. It is subject to pathological variations, but at present we know very little concerning its import, aside from the fact that a meat diet tends to increase greatly its output, while a milk

*See Kruger and Salomon. *Zeitschrift für physiol. Chem.*, Band xxiv, p. 364.

†*Deutsche Medicinische Wochenschrift*. 1897, No 14.

‡*Archiv. f. d. gesammte Physiologie*, 1898, Band lxix, p. 268.

diet and a diet rich in vegetable matter tends to decrease its excretion. Presumably there is connection between the creatin of the muscle and the creatinin of the urine, but exact physiological knowledge on this point is rather scanty. Creatinin may be readily detected in the urine by what is known as Weyl's test—viz., adding to a little urine in a test tube a few drops of a dilute solution of sodium nitroprusside, followed by the gradual addition of a dilute solution of sodium hydroxide. In the presence of creatinin this is followed by the appearance of a ruby-red color, which soon changes to an intense yellow. On warming the latter fluid with glacial acetic acid a green color results. Albumin and sugar do not interfere with this reaction, but acetone will respond to the first part of the test.

As purely pathological constituents of the urine, leucine and tyrosine occasionally make their appearance. These crystalline nitrogenous bodies are, as you know, normal products of pancreatic digestion, and under ordinary conditions are carried, after absorption, directly to the liver, where they disappear, presumably, undergoing decomposition. When present in the urine, these bodies are usually considered pathognomonic of acute yellow atrophy of the liver, although they are likewise stated to be present in the urine in certain rare cases of acute phosphorus poisoning associated with hepatic atrophy, and in hepatic atrophy due to typhoid fever, etc. Tyrosine, when very abundant, crystallizes from the urine as the latter cools. Ordinarily, however, urine must be concentrated somewhat, and then, on standing, both leucine and tyrosine crystallize out, if present, in characteristic forms, the leucine having the appearance of small balls somewhat resembling fat globules, but unlike the latter, usually showing concentric striations and fine radiating lines. Tyrosine, on the other hand, crystallizes in fine needles and bundles of needles. The crystals can be filtered from the urine and, if desired, separated by the use of alcohol, in which the leucine is more readily soluble. Tyrosine can be tested for with several striking color reactions—viz., Piria's, Hofmann's and Wurster's tests—while leucine sublimes in a white cloud when heated above 170 deg. C., and causes a reduction of mercurous nitrate when heated with a solution of the latter salt. How far the presence of leucine and tyrosine in the urine can be relied upon as a proof or indication even of acute yellow atrophy of the

liver is to my mind somewhat doubtful. An experience in my own family has made me skeptical of the validity of text-book statements in this direction. A lad, sixteen years of age, was attacked with what appeared to be catarrhal jaundice, but the case gradually took on a serious aspect, the patient losing the power of distinguishing external objects, while later delirium and unconsciousness alternated. At this time the urine was found loaded with leucine and tyrosine in addition to bile, and it was at once assumed that we had acute yellow atrophy to deal with. On palpation, however, the liver was found larger than normal, due doubtless to the pressure of bile. For two or three days both leucine and tyrosine continued in the urine, when finally the kidneys stopped action entirely and the patient rapidly passed into a comatose condition with incipient convulsions. Happily, after a time, repeated enemata of potassium acetate started up the kidney, consciousness gradually returned, and after a long convalescence recovery was complete. Now, after four years, the young man is strong and sturdy. Obviously, there could not have been atrophy of the liver, but I have never before or since seen any case where the urine for a day or two held such quantities of tyrosine and leucine as this. Repeated examinations of the urine during recovery always failed to show the presence of these two amido acids. Personally, I see no reason why leucine and tyrosine may not appear in the urine whenever the functional activity of the hepatic cells is interfered with. We are led to believe that normally urea is formed in the liver, also that leucine, and perhaps tyrosine, are antecedent stages in the formation of urea. In acute yellow atrophy and in phosphorus poisoning leucine and tyrosine appear in the urine in the place of urea. Why may not the same thing occur, perhaps in lesser degree, whenever there is a profound disturbance of the metabolic power of the liver cells? If so, then the presence of leucine and tyrosine in the urine is no longer to be looked on as an infallible sign of acute yellow atrophy of the liver. The matter, I think, needs looking into, and I would recommend the careful examination of the urine for these substances in severe cases of jaundice, as well as in other cases in which the liver is involved.

In testing the urine for bile, clinically at least, it suffices to look for bile pigments. Of the various tests now in use for this

purpose the Smith-Rosin test is perhaps the most convenient and delicate. To a little of the urine in a test tube about a third of its volume of a tincture of iodine diluted with alcohol is added in such a manner as to allow the iodine tincture to float on top of the urine. If bilirubin is present, a distinct emerald green ring appears at the point of contact of the two fluids. Gmelin's test, as modified by Rosenbach, is also good, and where there are good laboratory facilities, Huppert's test is also to be recommended. In suspected urobilinuria Gerhardt's test for urobilin may be used, but it can be relied upon only when the amount of urobilin present is fairly large. Von Jaksch's test is perhaps more reliable, but in many cases, at least, recourse must be had to the spectroscope for positive proof.

Urines which, on standing, tend to grow dark or even become black in color are always open to the suspicion of containing melanogen, which on oxidation give rise to the dark pigment melanin. Such a transition in color, however, is not proof of melanin, since other substances may be present in the urine which by oxidation furnish dark-colored products. Further, as you are doubtless aware, the detection of melanin itself is not positive proof of the existence of a melanotic tumor, since occasionally the same pigment makes its appearance in the urine in certain wasting diseases. This, indeed, is not strange, since melanins are products of the transformation of proteids. Indeed, this past year we have succeeded in my own laboratory in preparing artificially well-defined melanins through hydrolytic decomposition of certain forms of proteid matter. To test a urine for melanogen, a little of the fluid not yet colored is treated with bromine water, when, if the body is present, a yellow precipitate results, which gradually changes to black. Further, addition of a strong solution of ferric chloride to a true melanotic urine gives rise to a precipitate of phosphates having a gray color instead of the usual reddish brown. This latter reaction serves to distinguish also those dark-colored urines which are occasionally met with when large doses of salol and salicylic acid have been taken, the latter urines giving with ferric chloride precipitates which show more or less of a permanent violet color. These urines, coming under the general term of "phenol urines," may be quite normal in appearance when first voided, but gradually acquire a dark-brown or black color when exposed to the air.

This same phenomenon of oxidation may also be seen in cases of poisoning with carbolic acid, and after large doses of hydrochinnon, etc.

A chemical reaction concerning which much has been written of late years is Ehrlich's, or the diazo, reaction, originally thought to be pathognomonic of typhoid fever. Personally, I have had little experience with this reaction except in a general way, but careful perusal of the work of Simon* and of Greene† leads me to believe that the reaction, when properly tried and with sufficient experience to make one duly appreciative of the necessary precautions, may have considerable clinical value. I am aware that von Jaksch considers it of little or no value, and that he attributes the reaction, when obtained, to the presence of acetone, but on this point there is enough difference of opinion to render this conclusion somewhat questionable. It is true that the chromogen which is the cause of the reaction is met with not only in typhoid fever, but in other acute febrile diseases, and notably in pulmonary phthisis. Simon states, however, that "while the reaction may be observed in other diseases as well as in typhoid fever, it is usually not difficult to distinguish between these and the latter condition, excepting in certain cases of acute miliary tuberculosis. As the reaction, however, is obtained not later than the twenty-second day of the disease, and is usually present as early as the fifth or sixth day in typhoid fever, and while it generally does not appear earlier than the beginning of the third week, and then persists almost to the end in acute tuberculosis, its occurrence may be of decided value in diagnosis in many instances." The method of conducting the test recommended by Simon is to place a few cubic centimetres of the urine in a small test tube, when an equal quantity of the sulphanilic acid mixture (a saturated solution of sulphanilic acid in dilute hydrochloric acid, together with a little sodium-nitrite solution) is added, and the whole thoroughly shaken. One or two cubic centimetres of ammonia are then allowed to carefully run down the side of the tube, forming a colorless zone above the yellow urine containing the acid. At the juncture of the two fluids a more or less deeply colored ring appears in which the

*See Simon's *Clinical Diagnosis*, second edition, p. 447.

†The Diagnostic Value of Ehrlich's Diazo Reaction. *Journal of the American Medical Association*, February, 1894.

slightest carmine tinge may be readily seen. On now pouring the mixture into a porcelain dish containing water, a salmon-red color is obtained if the reaction is positive, while, if negative, the color is simply yellow or orange. I am inclined to believe that the reaction merits more careful study.

Among the normal chromogens of the urine indican takes first rank. Its significance in practical medicine lies in the fact that it is a product of oxidation of the indol formed in intestinal putrefaction. A large proportion of the indol so formed is absorbed and oxidized to indoxyl, after which it is combined with sulphuric acid in the liver, and eventually eliminated as a potassium salt of indoxylsulphuric acid, or indican. There is today, I think, no shadow of doubt that micro-organisms in the intestinal tract are solely responsible for the formation of indol and its ultimate appearance in the urine as indican. Naturally, the character of the material in the intestine—i. e., the nature of the food ingested—has an influence upon the production of indol, just as the character of the culture media in general exerts an influence upon the growth and activity of all bacteria. The essential element, however, is the presence of the micro-organisms in the intestine, and the amount of indican to be detected in the urine may be taken as an indication of the extent of intestinal putrefaction, and indirectly of the acidity of the gastric juice, since the latter is the only agent between the mouth and the intestine which can destroy the ingested germs. In conformity with this statement, it is a matter of general observation that indicanuria is almost invariably observed in all cases where there is hypoacidity of the gastric juice. For the clinician I believe that the examination of the urine for indican is a matter of the utmost importance, and, as the necessary tests are exceedingly simple, there is no reason why they should not be made use of with as much frequency as the more common tests for albumin, sugar, etc. Jaffe's method, as modified by Stokvis, is to be recommended, and depends simply upon the oxidation, by means of concentrated hydrochloric acid and sodium hypochlorite, of the indican to indigo blue and its solution in chloroform. By using the same volumes of fluid each time comparative tests can be made with considerable accuracy. The presence of albumin offers no difficulty, but bile pigments must be removed when present. Exact quantitative methods, easy of application, for

the determination of indican have been wanting, but within the last two months there has appeared a contribution from the pædiatric clinic at Christiania* indicating that the difficulty has been solved. The author has carried out twelve hundred quantitative estimations in a study of physiological and pathological indicanuria, and promises soon a detailed report of the results.

Other products of intestinal putrefaction liable to appear in the urine are skatoxyl, coming from the oxidation of skatol, phenol, and paraeresol, all existing, like the indoxyl, combined with sulphuric acid. Consequently we may make use of the combined sulphuric acid of the urine as a measure of the extent of intestinal putrefaction, determining quantitatively in the twenty-four hours' urine the ratio between the total and combined sulphuric acid. This naturally requires more refined chemical methods.

Of special significance to the clinician is the presence of acetone and diacetic acid in the urine. These bodies owe their origin especially to the breaking down of the proteid matter of the tissues, and hence are most conspicuous in those conditions where inanition is pronounced. Physiological acetonuria is greatest when carbohydrates are entirely excluded and the proteid matters of the diet reduced to a minimum. In wasting diseases, and other pathological conditions where carbohydrates are naturally withdrawn from the diet, the acetone in the urine may become quite conspicuous. In the diabetic form of acetonuria constant examination of the urine for acetone is imperative. It is quite certain that the detection of acetone in appreciable quantity in conjunction with sugar warrants the diagnosis of diabetes mellitus, while in severe forms of the disease, where acetonuria and the attendant symptoms are prominent, it is surely a duty to follow most closely the excretion of acetone, and as *Wirschfeld*† recommends, add at once large amounts of carbohydrates to the diet whenever the acetonuria approaches a dangerous height. The presence of acetone in large amount constitutes a danger signal which can not be safely ignored, and consequently the practitioner should have knowledge of the appropriate tests to be applied for the detection of this substance.

*Wang. Ueber die quantitative Bestimmung des Harnindikans. Vorläufige Mittheilung. Zeitschrift für physiol. Chemie, 1898, Band xxv, p. 406.

†Ueber die Acetonuria. Centralbl. für inn. Med., 1896, No. 24.

Legal's sodium nitroprusside test may be used for acetone, applied directly to the urine, but it is safer to distill about a litre of the fluid with a little phosphoric acid and test the first twenty to thirty cubic centimetres of the distillate. With this distillate, Dieben's test with iodopotassium iodide in the presence of sodium hydroxide may be used, the formation of iodotorm affording evidence of the presence of acetone. For the quantitative estimation of acetone Huppert's modification of Messinger's method may be advantageously employed.

In the testing of urine for sugar—i. e., glucose—emphasis is to be laid upon the advantage of using Bottger-Almen-Nylander test (alkaline bismuth solution) as well as the ordinary Fehling's or alkaline copper solution. The latter fluid many times shows an incipient reduction with samples of urine, due not to sugar, but to the creatinin and other reducing substances normally present in urine. With the alkaline bismuth solution, on the other hand, these bodies are less liable to manifest their presence, and erroneous conclusions are thus sometimes avoided. Further, the bismuth solution is the more delicate reagent for sugar. A test which all practitioners should now be familiar with is the phenylhydrazin test for sugar, since it is free from all fallacies and hence is absolutely reliable. The crystals of phenylglucosazone which result in the presence of sugar are exceedingly characteristic under the microscope, and the test is fairly delicate when properly conducted. Occasionally it is necessary to look for sugars in the urine other than glucose or dextrose, in which case careful scrutiny of the results obtained by use of the polariscope, fermentation, reduction, and phenylhydrazine tests will give the desired information.

The importance of chemical tests for the detection of albumin in the urine hardly calls for notice, it is so self-evident, but it may be well to emphasize the importance of looking more carefully to the nature of the proteid present. The tests ordinarily applied, such as heat coagulation, nitric acid, trichloroacetic acid, acetic acid and potassium ferrocyanide, picric acid, etc., merely testify to the presence of albuminous matter without indicating the character of the proteid. To identify serum albumin, the urine is rendered neutral or faintly alkaline with sodium hydroxide, after which the fluid is saturated with crystals of magnesium sulphate, thereby removing any globulin present. The

clear filtrate is then made decidedly acid with acetic acid and heated to boiling, when a flocculent precipitate of serum albumin will result if present. To identify serum globulin, the urine is rendered alkaline with ammonium hydroxide, the precipitate of earthy phosphates filtered off, and the clear filtrate mixed with an equal volume of saturated solution of ammonium sulphate, when the globulin, if present, will be precipitated. To test for albumoses or proteoses, fifty to a hundred cubic centimetres of the urine, freed, if necessary, from albumin and globulin by heat coagulation, are saturated while boiling hot with crystals of ammonium sulphate. Proteoses, if present, are precipitated in a more or less gummy form, although a precipitate at this point does not necessarily indicate their presence. The precipitate is next washed with alcohol to free it from urobilin,* after which it is dissolved in a little water, the solution made strongly alkaline with potassium hydroxide (a large excess is necessary), and a few drops of a very dilute solution of cupric sulphate added. A pink or reddish violet color—the biuret reaction—is a proof of the presence of proteose. The removal of urobilin from the ammonium-sulphate precipitate is rendered necessary because this substance also gives the biuret reaction. To test for nucleoalbumin, the filtered urine, freed from coagulable proteids, if any are present, is treated with an excess of concentrated acetic acid by which the nucleoalbumin is precipitated. Histon, a peptonelike body, may also be found in the urine in leucæmia, and an analogous substance, possibly identical with it, has been observed in the urine in acute peritonitis, scarlatina, croupous pneumonia, etc. True peptone is apparently never present in the urine, so-called peptonuria being in reality albumosuria.

Let us look now for a moment at another chapter of practical medicine, where chemistry has lent a hand in improving and extending methods of diagnosis and treatment. I refer to gastric digestion. I need hardly emphasize the part which chemistry has played in developing our knowledge of the digestive processes or the aid it has rendered in giving us an insight into the character of the changes which gastric juice and the other digestive fluids produce in the complicated act of digestion. All this has become a part of our everyday knowledge, and is referred to

*See Ivan Bang. *Deutsche medicinische Wochenschrift*, 1898, p. 17.

here only as indicating another line along which chemistry has rendered important aid to physiology and scientific medicine. Today, however, practical medicine reaps some of the benefits, and the practitioner dealing with disorders of the gastro-intestinal tract must needs pay attention to the methods of diagnosis which are afforded by our increased knowledge in this direction.

Normal gastric juice contains three substances upon which its physiological power rests—viz., hydrochloric acid and the two enzymes, pepsin and rennin. Disturbance of gastric digestion may depend upon increased or decreased secretion of hydrochloric acid, more generally the latter, and sometimes upon decreased secretion of pepsinogen or pepsin, although experience indicates that the latter is of very rare occurrence. The well-known method inaugurated by Ewald of feeding a definite test meal and then withdrawing the stomach contents at a stated interval for chemical examination is now so widely practised that it hardly needs mention, but it furnishes another illustration of the intimate relation between chemistry and practical medicine. The determination of total acidity, of the relative proportion of free and combined hydrochloric acid, of the presence of lactic or other organic acid, together with a determination of the presence or absence of pepsin and rennin, must all be carried out by appropriate chemical tests, for in no other way can the information be obtained. The methods at present available, although numerous, are by no means perfect, especially those which have to do with the determination of free and combined hydrochloric acid, still, they suffice to give us valuable and practical results. Total acidity, meaning thereby the acidity due to free hydrochloric or organic acids, combined acid, and acid salts is advantageously determined by titrating with a decinormal solution of sodium hydroxide, using phenolphthalein as an indicator. Free hydrochloric acid may be determined by Topfer's* method, using dimethylamidoazobenzol as an indicator, while by titrating another portion of the juice with alizarin as an indicator we obtain the acidity referable to free acids and acid salts. Since alizarin does not react with combined hydrochloric acid, by simply subtracting the last values from the total acidity, as indicated by phenolphthalein, we obtain the proportion of combined hydrochloric acid contained in the sample. Long-continued use of Topfer's method in my laboratory has given very satisfactory re-

sults, but, as in most methods involving color changes, it is very necessary to become familiar, through frequent experience, with the tones of color to be sought for. Where only small quantities of fluid are available for examination, it is possible to combine the titrations with phenolphthalein and dimethylamidoazobenzol, as recommended by Einhorn,[†] the values being the same as when two distinct titrations are made. We have also found, in conformity with Hari's[‡] observations that in the absence of free hydrochloric acid—that is, when no reaction is obtained with dimethylamidoazobenzol—the quantitative determinations of hydrochloric acid by the Topfer method cease to be accurate, and under such conditions it can not be employed. But there are many other methods at hand—although for clinical purposes Topfer's method, when available, has many advantages—such as the Hayem-Winter method, the Mintz method, the Helmer and Seemann's process, the method of Martius and Luttke, etc. Dr. Thacher, in the recent report of the Presbyterian Hospital,[§] has given an exceedingly interesting comparison of these various methods. Further, there are, as you know, many indicators which can be made use of, some in the form of test papers, if desired, as simple tests for the presence of free hydrochloric acid in the gastric contents, such as phloroglucin-vanillin or Gunzberg's reagent, methyl violet, tropæolin oo, Congo red, benzopurpurin 6 B, etc., all of which have more or less clinical value.

In testing for lactic acid, the direct application of the well-known Uffelmann's test to the stomach fluid is no longer practised, but instead a little of the filtered gastric juice is extracted with ether, the ethereal extract evaporated, the residue dissolved in water, and this solution tested, making use of the ferric-chloride and carbolic-acid reaction. Kelling's method may also be employed, in which case a few cubic centimetres of the gastric juice are diluted with twelve parts of water, and one or two drops of a five-per-cent. solution of ferric chloride added. If lactic acid is present, the fluid shows a green color by transmitted light. It is likewise advantageous to determine the pro-

**Zeitschrift für physiol. Chemie*, Band xix, p. 104.

†*New York Medical Journal*, May 9, 1896, p. 603.

‡*Archiv für Verdauungskrankh.*, ii, pp. 182, 332.

§Dr. J. S. Thacher. *Medical and Surgical Report of the Presbyterian Hospital in the City of New York*, 1898, vol. iii, p. 14.

teolytic power of the stomach contents—in the presence of sufficient acid—thus obtaining light on the amount of pepsin secreted. Furthermore, familiarity with the pepsin test is desirable from another point of view—viz., the ability to determine, approximately at least, the digestive power of a pepsin preparation, so as to form an intelligent opinion of the value of a given product. Similarly, familiarity with the tests applied for the detection of the milk-curdling enzyme, and the ability to make comparative trials of strength, are desirable additions to one's knowledge of chemical methods of value in a practical way.

But I have already spent more time in this rambling discussion of the subject than is perhaps justifiable, although there still remain many other lines of thought bearing upon the relation of chemistry to practical medicine. It has been my intention, however, merely to place before you, even though in disconnected fashion, a few illustrations of the ways in which chemistry can lend aid to the practitioner in his daily work, and to emphasize the desirability of extending, so far as practicable, this line of diagnosis. Physiological chemistry and pathological chemistry stand in close touch with physiology and pathology. We must needs have a full understanding of the normal, in order to fully appreciate the significance of the abnormal, and the line of demarcation between the two is exceedingly thin and wavy. Chemistry alone can unravel many of the mysteries which surround us in our steady advance toward a more complete knowledge of life, and, as I believe, chemistry alone can make clear many of those deviations from the normal which are the forerunners of disease and death. Let us hope, therefore, for a fuller appreciation of the intimate relation which chemistry bears to scientific and practical medicine, and for a more extended use of the many practical methods which chemistry bears to scientific and practical medicine, and for a more extended use of the many practical methods which chemistry offers as an aid to accurate diagnosis.—*New York Medical Journal.*

Cook County Hospital Examination for Internes.

BY W. A. EVANS, M. D., 103 STATE ST., CHICAGO, ILL.

Cook County hospital has long enjoyed the reputation of being the best hospital in America from the stand point of the

interne. There is no other hospital where he has so much liberty, opportunity and responsibility. There are twelve internes annually chosen by competitive examination. About sixty of the flower of Chicago graduates take the examination. In the thirty years that this method has been in vogue scandal has touched it only once and that nearly ten years ago. The best earnest not only of its fairness but its effectiveness is the list of those who have graduated from the hospital. This list includes J. B. Murphy, Nicholas Senn, E. P. Davis, J. A. Fordyce, Roswell Park, Frank Billings, T. A. Davis, Weller Van Hook, A. D. Bevan and so on through nearly every name of great prominence in Chicago.

Recently the board of county commissioners announced that the internes would go under civil service and that the competitive examinations would be held by the civil service commissioners. This the doctors answered by saying that the old method was the refinement of civil service. That its excellence could never be approximated by a political civil service. The town was deeply stirred. Every newspaper was with the medical men. It was into this atmosphere that The Chicago Record came one morning with these questions that it is supposed that Mr. George Ade stole from the rooms of the civil service commissioners. However, the civil service commissioners deny the allegation and waive any right of ownership.

TO BE ANSWERED BY ALL APPLICANTS FOR THE POSITION OF INTERNE AT THE COOK COUNTY HOSPITAL.

I. In disabling an enemy of good government at a primary election which blow is preferable, one on the inferior maxillary or one in the solar plexus?

2. Before pulling a leg, is it necessary to administer an anæsthetic?

3. What is a joint? Give the location of the hip joint.

4. Which is the more nourishing food for convalescents, weiss beer or mixed ale?

5. If you were to find a gentlemen of respectable appearance, with money and jewelry, lying unconscious in the street and there happened to be no one at hand to assist you, what would be the first thing to do?

6. According to the laws of hygiene, what is the correct poultice for a Frankfurter sausage—mustard or horse-radish?

7. In dressing up an easy mark is it advisable to use splints?

8. What is the best brand of knock-out drops? How should they be administered?

9. (a) What has been your experience in the use of instruments? (b) Which is more highly indorsed by modern practice, a razor or the knucks.

10. (a) In which school of medicine did you receive your early training, the republican or the democratic? (b) Did you ever study under "Doc" Jamison?

11. Describe the followiug parts of the human system: (a) the coco, (b) the lamps, (c) the listeners, (d) the beak, (e) the slats, (f) the mit.

12. Is St. Louis beer an antiseptic?

13. (a) Would you exert yourself to save a man's life if you knew that as soon as he recovered he would go out and vote against the party of good government? (b) Why not?

14. Are you in favor of the eight-hour day for typhoid patients?

15. Have you studied anatomy? If so what is Robert J. Fitzsimmons' cchest measurement? Also, describe the present state of Kid McCoy's knuckles.

16. Give the chemical name of the following drug com. pound, to-wit:

Ice
Simple syrup
Angostura bitters
One jigger of booze
Ditto of Vermouth
One cherry

17. In nursing, is it advisable to have both of the object balls against the cushion?

18. While working and shaking down a candidate for the purpose of compelling him to cough up, do you favor a plain massage or the Swedish movement?

19. Give three reasons why the county hospital should be closed on election day.

20. Which brings an eye around sooner, a raw oyster or a piece of steak? Have you ever tried painting?

21. What is the meaning of the surgical expression, "to shoot the hot air into his nobs?"

22. In dissecting a live subject where should you begin to carve?

23. (a) Name three kinds of medicine. (b) Should water be taken afterward?

24. (a) Can a patient who has died during the preceding summer register and vote at a spring election? (b) Explain how.

25. At post-mortem examinations who is entitled to the gold in the teeth?

Reports of Societies.—Proceedings of the Memphis Medical Society, as Appearing in the March Lancet.

STATED MEETING, JANUARY 17, 1899, DR. B. F. TURNER, PRESIDENT.

Dr. W. B. Rogers read a paper on Intra-scrotal Enlargements especially with reference to their diagnosis. He adopted the following anatomical classification:

I. Enlargement of the cord alone, i. e., from, or including, or surrounding the cord:

- a. Varicocele.
- b. Hydrocele of the cord—1. Encysted.
2. Diffused.
- c. Hernia—1. Enterocoele.
2. Epiplocele.
- d. Hematocele.
- e. Spermatocoele.

II. Enlargement of the testis alone.

- a. Inflammatory—1. Epididymitis.
2. Orchitis.
- b. Non-inflammatory—1. Hydrocele. Simple.
Congenital.
Symptomatic.
2. Hematocele.
- c. Sarcocoele—Inflammatory (Simple).
Syphilitic.
Tubercular.
Fatty.
Cartilaginous.
Malignant.

III. Enlargement of both cord and testis.

Hernia—1. Enterocoele.

2. Epiplocele.

Under this head will come some of the other enlargements if fully developed. Diffused hydrocele of the cord is a collection of serum in the connective tissue. Encysted hydrocele of the cord occurs in the process of tunica vaginalis.

For the purpose of the diagnosis we may divide these enlargements into the reducible and the irreducible. Of the enlargements of the cord, hernia and varicocele are reducible. When reduced pressure will prevent the return of a hernia, but not a varicocele. Hydrocele and hematocele are irreducible: the former is transparent, the latter opaque. In negroes, where this test is of no value, a hypodermic may be used to make the diagnosis. Fatty tumor of the cord has occurred, but had best be let alone, unless large.

Of the enlargement of the testes alone, only one is reducible, viz., congenital hydrocele. Another division may be made of these enlargements into cystic and solid, the two being readily differentiated by puncture with a hypodermic. In uncomplicated tumors of the testis a diagnosis can generally be made without asking the patient a single question. The diagnostic features of inflammatory enlargements of the testis are sufficiently plain. Of the hydroceles, the simple form is due to a loss of balance in the blood vessels of the parts, leading to an effusion of serum into the tunica vaginalis. Symptomatic hydrocele is due to a pathological condition in the testis. It is important to differentiate these two for therapeutic reasons.

Hematocele is due to traumatic ruptures of the large vessels around the epididymis. It is usually absorbed, but if not it may be laid open and laid out.

Of the solid enlargements of the testis, simple sarcocele can be diagnosed by the history and by exploration. It is a slow inflammatory process, with a deposit of fibrin in the connective tissue of the testicle. It forms a small, hard, painless tumor.

Syphilitic tumors do not get large, and are usually confined to the body of the testicle. Dr. Rogers cited a case in which the enlargement was double and confined to the epididymis, causing impotence. A cure was obtained by the iodides. Syphilitic tumors are painless and of slow growth.

Tuberculosis of the testis begins in the epididymis, usually the head, grows slowly and painlessly, and tends to be cheesy, the skins breaks and a fungous growth results.

Of fatty tumors one case is reported.

Cartilaginous tumors are found in the testis in common with the parotid and mammary glands and in the testicle are generally associated with malignancy. This tumor is very hard.

Malignant tumors grow rapidly, and in the case carcinoma cause the neighboring lymphatics to be enlarged. Carcinoma is painful, sarcoma is not. Carcinoma is said by a well-known author to be common in the young, but this is not Dr. Rogers' experience. The features which belong to these growths in all localities and which separate them from each other, serve as diagnostic points for malignant tumors of the testis.

Hernia involving cord and testis is generally not difficult to recognize.

Dr. Frank A. Jones has seen many cases of syphilitic sarcocele among the negroes at the East End Dispensary.

Dr. Wm. Krauss has had the opportunity of examining specimens of all sort of tumors of the testicle, and a recent one submitted to him by Dr. Smythe was found to be a fibro-myoma, probably springing from the muscular tissue of the walls of the blood vessel or of the vas deferens. Another case from the same operator proved to be purely fibrous, of inflammatory origin.

Dr. F. D. Smythe has seen an inflammatory enlargement of the cord quite often from sepsis following the operation for varicocele. In regard to the cases referred to by Dr. Krauss, the fibro-myoma was very large, extending up to the external ring, and had a colloid center. The fibrous enlargement was small and very hard, interfering with sexual intercourse and causing pain in the testis.

Dr. G. G. Buford mentioned a case where the patient rode home on a mule after having the testicle punctured with a hypodermic, and an orchitis was set up, for which he was held responsible. In another patient with a tubercular sarcocele, pain was quite a prominent symptom.

Dr. E. P. Sale called Dr. Rogers' attention to the omission of spermatocele, inserted above to make the table complete.

This is a small, fluctuating tumor of the cord, containing "seminal seed."

Dr. R. B. Maury reported a case which was looked upon as Epididymitis or Orchitis. It was of fifteen days duration when he saw it, and containing fluid, was tapped, and the testicle found enlarged. There was no history of venereal disease, but of an effort on the part of the patient to catch himself and avoid a fall, and this was followed by pain in the testis. There was subsequently another slight injury, with re-inflammation of the testicle and its final protrusion and destruction. Dr. Maury has seen ovarian pain follow just such an injury (indirect trauma).

Dr. Rogers referred briefly to the treatment of hydrocele. Injections of iodine, tannic acid, etc., cause restoration of the lost balance to the blood vessels. The "open method" of free incision and packing causes obliteration of the sac; carbolic acid causes destruction and inflammation. In a case treated by iodine, carbolic acid, and the "open method, a recurrence was relieved by repeated injections. In reply to a question from Dr. Williams, he believed dermoid cysts are rarely met with in the testicle. In reply to a question from Dr. Sale, he had not used turpentine as an injection in hydrocele. In reply to a question from Dr. Moore, he does not think the injection of carbolic acid is attended by any danger of carbolic poisoning. After treatment by injection, some patients remain well four or five years and then the trouble recurs.

Dr. Smythe thinks carbolic cures by adhesion.

Dr. Sale has used turpentine and oil in one case by injection, bringing about a cure, but producing mild strangury. It did not cause much pain.

Dr. Krauss said that adhesions between the surfaces of the tunica vaginalis was not necessary for a cure, but only a closure of the openings in the serous membrane.

Dr. F. D. Smythe read a paper entitled, "A Plea Against the Unwarranted Assaults upon the Female Genitalia by Aspirants for Notoriety in the Practice of Obstetrics and Gynecology." Either through ignorance, desire to do something, or for a fee, practically normal pelvic and peritoneal structures are often attacked with disastrous results. Even when indications are present, operations undertaken by one not qualified to operate utterly fail to relieve the condition, if indeed they do not

make it worse. He spoke specifically against the reckless curetting of puerperal uteri, needless vaginal examinations of virgins, useless removal of tubes and ovaries, improperly done plastic operations, and unnecessary gynecological "tinkering."

Dr. Edwin Williams is a believer in medical as opposed to surgical treatment in the majority of cases, and thinks the pelvic organs in virgins should always be examined by the rectum.

Dr. Alfred Moore spoke of the danger of breaking down, with a curette, the protecting leukocytic wall in the puerperal uterus and permitting septic infection. On the other hand, it is necessary, when the wall is infected, to remove it with the finger or dull curette. It is difficult to differentiate these cases. The uterine contents may be drawn off in a sterile tube, and submitted to bacteriological examination for the purpose of making a diagnosis.

Dr. Jones thinks Dr. Smythe is rather "ultra." Much of the trouble lies in the lack of preparation which alleged "specialists" experience.

Dr. Krauss approved of such iconoclasm when it emanates from one qualified to speak *ex cathedra*.

Dr. Buford agreed as to the evils of indiscriminate specialism. The danger of needless operations is based on improper diagnosis.

Dr. E. C. Ellett thinks Dr. Smythe's remarks might have a broader application than to any one specialty. Men frequently blossom as specialists after a six-weeks course in a post-graduate school, and sometimes simply drop general practice and take up a specialty without any preparation or special study at all. Such men not only fail to become of any advantage to themselves or their unfortunate patients, but bring discredit upon the profession as a whole, and especially on the specialty which they presume to practice.

Dr. Sale believes in conservatism, but thinks Dr. Smythe is too radical in some things. In virgins it is sometimes absolutely necessary to make a vaginal examination. In obstetrics, too, the present "do nothing" plan is often inappropriate.

The president said that every man must at some time do his first operation, particularly in rural districts where it is not possible to always command skilled operators. In obstetrical work he favors frequent examinations under proper precautions.

Dr. Smythe regretted that he had been misunderstood in some ways, but was pleased at the generally favorable reception of his paper.

Correspondence.

OXFORD, MISS., January 24, 1899.

DR. H. M. FOLKERS, BILOXI, MISS.:

DEAR DOCTOR: Please announce to the members of the association through the JOURNAL that in accordance with Sec. 6, Art. 5 of the constitution and by-laws, as chairman of Section on Pædiatrics, I have associated with me Drs. Clarke of Meridian, Ballard of Natchez and Cook of Hattiesburg.

Dr. Clarke's department is "Brain Diseases of Children," including reflex nervous disturbances. Dr. Ballard's department is "Chest Diseases of Children," respiratory and circulatory. Dr. Cook's department is "Intestinal Diseases of Children." I shall confine myself to the "Diseases of the Throat."

Urge upon all members who intend preparing papers on these subjects to communicate with, and report cases to, the respective chairman of each department whom I have named.

Very truly,

P. W. ROWLAND,
Chairman Section on Pædiatrics.

MICHIGAN STATE BOARD OF HEALTH.

At regular meeting of the Michigan State Board of Health, the following preambles and resolutions were unanimously adopted:

Whereas, It is eminently desirable that reliable vital statistics shall be collected by the next United States Census, and

Whereas, The system to be followed should be in accord with the most progressive methods observed in several of the states, the Michigan State Board of Health, at its regular meeting held at Lansing, January 13, 1899,

Resolved, That the representatives and senators from Mich-

igan be requested to lend their assistance in securing such correct vital statistics in non-registration states as may be possible;

Resolved, Furthermore, that the appointment of Dr. Cressy L. Wilbur, the present efficient chief of the Michigan Vital Statistics, be urged as Chief Vital Statistician of the next United States Census.

[ATTEST]

FRANK WELLS, President.

HENRY B. BAKER, Secretary.

LANSING, MICH., January 20, 1899.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

MERIDIAN, MISS., February 4, 1899.

DEAR DOCTOR: The Thirty-Second Annual meeting of the Mississippi State Medical Association will convene in Representative Hall, Jackson, April 19, 20 and 21, 1899. Matters of special interest to the profession of the state will be discussed at this meeting and a full attendance is urgently desired. Five names will be selected by the Association, for appointment by the Governor, as members of the State Board of Health. Kindly forward the title of the paper you will read before the Association by the 1st of April, as I wish to embody it in the regular program to be sent out then.

Very truly,

J. R. TACKETT, Secretary.

THE Louisiana State Board of Health at its meeting on February 15 elected the following gentlemen as its board of experts: Jos. Holt, T. S. Kennedy, E. S. Lewis, F. Loeber, R. Matas, F. W. Parham and L. F. Salomon. Up to the present writing it has not been made public as to whether these gentlemen will serve. We sincerely trust that they will lay aside the just indignation which some of them must naturally feel at Dr. Souchon and thus lend their great weight and prestige to the reconstruction of some confidence in the doings of President Souchon. In Mississippi we have confidence in every member of the new board of experts as above mentioned and fully believe if they are called on to make a decision about a case of yellow fever that if it be such it will be so declared.

Editorial.

H. M. FOLKES, M. D., BILOXI, MISSISSIPPI,

Editor and Business Manager.

COLLABORATORS.—J. R. Tackett, M. D., Meridian, Miss.; W. A. Carnes, M. D., Kosciusko, Miss.; H. A. Minor, M. D., Macon, Miss.; H. N. Street, M. D., Gloster, Miss.; H. H. Haralson, M. D., Vicksburg, Miss.; C. L. Horton, M. D., New Orleans, La.; E. M. Holder, M. D., Memphis, Tenn.; W. A. Evans, M. D., Chicago, Ill.

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SEC. 7. Admission Cards may be issued by the officers of the Association with the obligation for the candidate's signature in the center and blank marginal spaces on the left and right margins for the signatures of the three members who recommend, and the three officers who admit the applicant to membership.

The above section was adopted in order to admit persons eligible to membership during vacation. Either of the above named officers will furnish, on application, the necessary card.

Executive Committee Mississippi Department Public Health, 1898.

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H. CHRISTMAS, M. D.....Tchula
GEO. A. TEUNNISSON, M. D.....Monticello
E. A. ROWAN, M. D.....Wesson

VACCINATION.

Poor old Mississippi! What Louisiana fails to give us on one side with its yellow fever, Alabama makes up on the other with small-pox, so our cup is always full to overflowing. In the

year just passed small-pox has certainly cost us not less than \$8,000, and probably more, and every bit of it was unnecessary. For the State Board of Health has been warning the people of the danger we were running into, and has never let pass an opportunity to urge vaccination. Rudyard Kipling is exactly right; you have to keep hammering away at them all the time "lest they forget, lest they forget," and then they won't always remember. When diseases quit killing then people lose all dread and will not take precaution to protect themselves or others, and so it is with the variety of small-pox we have been having in the south for the past three years. The mortality has been almost nothing in our state and Alabama and the disease has masqueraded as chicken-pox until it is almost a shame to go into a community and alarm them by announcing the presence of a disease which they have all been taught to fear, but it is small-pox and the law so provides. Fads we have ever with us and I suppose always will, but it is a matter of wonder to a sensible thinking man how anybody in this closing of the nineteenth century can be so foolish as to oppose vaccination as it can be scientifically done with glycerinated lymph as advised by the health commissioner of Chicago, Dr. Reynolds.

In the old way, though even here the results in Germany where vaccination has been compulsory since 1874, are enough to convince any sensible man of its advisability. Some very ugly arms used to be seen, and from what we know of bacteriology now the wonder is that more did not appear, as it has for a long time been known that points were a very uncertain quantity both as to effectiveness of the procedure and the amount of septic matter they might also bear.

NOT since the days of Joseph Holt has there been such an advance by a health body as was the step taken by the Mississippi State Board at their meeting in Jackson recently. After passing some very forcible resolutions, which appear elsewhere, they gave the seal of scientific approval, fortunately backed by actual and practical experience, to the non-quarantining of territory for the presence of isolated, guarded and honestly announced cases of yellow fever. Of course this is not new, but its great value lies in the reassurance it gives to the outside world as to

the established rule of the board and is but another evidence of the character of that body. This board, whose watchword has been honesty, has had the most difficult problems in quarantine work of any ever before seen in this state and in almost every instance has grasped the situation and through its executive officer, Dr. Hunter, has demonstrated its capability as guardian of the public health. As a model it is respectfully referred to the Louisiana State Board of Health.

* * *

ABORTION.

Dr. J. B. Perez' Female Regulating Pills—The surest remedies for all female irregularities; sold by druggists. Office, 714 North Rampart, opposite Congo Square.

Ladies—Chichester's English Pennyroyal Pills (Diamond brand) are the best; safe, reliable; take no other; send 4 cents in stamps for particulars. "Relief for Ladies" in letter by return mail; at druggists. Chichester Chemical Co., Philadelphia, Pa.

Wilcox Compound Tansy Pills—The only reliable female regulator. Never fails. Price, \$2 by mail. Take no substitute. Write for woman's safeguard, free. Wilcox Medical Co., 228 S. 8th street, Philadelphia, Pa.

The above advertisements are taken from the so-called personal column of one of the big New Orleans daily papers which enters the homes of this country. What between the pernicious French novel and these slimy allurements for an easy method of escaping the consequences of a taste of forbidden fruit, it were no wonder that these unblushing charlatans number their victims by the score. It is a source of profound amazement to me how it is that the government will assail legitimate medical works as has been recently done in one of our large cities—fortunately it completely failed—and then sit supinely by and let these corrupting rascals have full and unlimited use of the mails. We have recently read of an over-sharp fellow in the north, who was using the mails to sell lamp wicks for 40 cents which ordinarily sell at six for a nickle. This individual was promptly proceeded against and as promptly jailed on the ground of using the mails to defraud. Now I would like to know the difference between this man selling wicks at 40 cents a piece and the vendors of most patent medicines who put possibly 20 cents worth

of ingredients in a package and sell it for a dollar and promise to accomplish all sorts of wonderful things with it. The lamp wick was of some value, but 95 per cent. of patent medicines are not. So these abortifacients are openly advertised and the mails as openly used to carry both the vile stuff and the civilizing newspapers. The attention of the United States district attorney is respectfully called to these facts and a protest is here entered that we in this state no longer permit such vicious practices to continue.

In the Public Health Department is a copy of the resolutions adopted by the State Board of Health in Jackson on February 3, 1899. As this paper has had its say about the Louisiana and New Orleans Boards of Health, no further comment is necessary. Messrs. Souchon and Kohnke have made their beds and must lie in them. The article by Dr. McKowen, referred to by Dr. Haralson, is the most severe arraignment I have ever seen in print and so far has not been refuted. He makes specific charges and gives names and dates. A libel suit would test the correctness of his assertions.

Public Health.

STATE HOSPITAL FOR CONSUMPTIVES.—According to press dispatches the Michigan State Board of Health has decided to ask the legislature to establish a state hospital for consumptives and to enact a law providing for the better reporting of consumption to local health officers and also for a law providing for a board of state medical examiners.—*Journal of the American Medical Association.*

YELLOW FEVER IN MEXICO.—Reports recently presented to the Mexican government by experts sent to investigate the recent small epidemic at Tampico assert that the disease was not imported. No ships had entered the port from infected points, and the quarantine was too strict to allow any cases to enter the city. The disease also broke out in the center of the town,

among persons who had recently come from the central table-land, and not in the shipping district. They conclude that in all Mexican ports the germs of yellow fever are always lying dormant, and that the combination of the necessary conditions with an appropriate "soil" may induce an epidemic at any time. Sanitary prophylaxis is the only means to put an end to this constant menace.—*Bol. del Consejo Sup. de Salubridad*, December 21, 1898.—*Journal of the American Medical Association*.

**

PROPAGATION OF BUBONIC PLAGUE.—We note in Simond's comprehensive study of the plague (*Annales de l'Institut Pasteur*, October, 1898), that the flea is the means by which the plague is transmitted. The germ thrives in the alimentary canal of the flea and is then inoculated into the rat or man the flea alights on. A temperature of 70 degs. C., for several hours, suffices for disinfection, and protective measures against fleas and rats and persons arriving from infected localities, with prophylactic serum injections, he considers would reduce the number of cases to the minimum.—*Journal of the American Medical Association*.

**

Resolutions adopted by the Mississippi State Board of Health at Jackson, February 3, 1899:

"Whereas, New Orleans is a menace to the health of the people of Mississippi, on account of the lax management of epidemic, contagious diseases by its health authorities, as evidenced by its management of yellow fever during last year; and

"Whereas, the presidents of the boards of health of the State of Louisiana and the City of New Orleans, Drs. Edmond Sonchon and Quitman Kohnke, favor concealing yellow fever when it appears in New Orleans, the former contending that yellow fever, called by him 'yellowoid,' is not a quarantinable disease, and the latter denouncing the laws of his State which requires physicians to report cases of yellow fever, as charged by Dr. McKewan, and without refutation so far as known to this board; and

"Whereas, both these physicians, executive officers of these boards, have refused to inform the country at large when cases of yellow fever and deaths from yellow fever have been reported to them by physicians of their city (see charges and specifica-

tions by Dr. John C. McKewan, Baton Rouge Advocate, weekly, Jan. 21, 1899); and

“Whereas, in their failure to do this they have violated an agreement between the health officials of the Southern States, to which agreement they were parties, made at the Atlanta convention in 1898; and

“Whereas, we believe the refusal of these executive officers of the boards of health of Louisiana and New Orleans to give this information was due to the influence brought against such action by the commercial exchanges in New Orleans; therefore, be it

“1. Resolved, That yellow fever is a quarantinable disease, being placed first on the list of quarantinable diseases by all authorities of the past and present.

“2. Resolved, That the name of ‘yellowoid’ given the disease by Dr. Souchon is unscientific, unwarranted and misleading, and is calculated to entice people into an exposure to yellow fever, thereby endangering their lives and the lives of others.

“3. Resolved, That we condemn the practice of concealing yellow fever by health authorities, it matters not how mild the disease may be, because the mildest cases are produced by the same organism that produces the most malignant cases.

“4. Resolved, That a prompt report of all cases of yellow fever and honesty in the enforcement of health regulations are the only means by which to prevent the loss of life and the destruction of commerce, since it has been fully established that science is able to check the spread of the disease and permit commerce to be carried on without material obstruction.

“5. Resolved, That yellow fever was introduced into our State last year from New Orleans, La., because of the failure of the health officials of that city and State to inform our board of the existence of the disease in New Orleans, thus preventing us from taking necessary steps for our protection.

“6. Resolved, That we appreciate the commercial interests of our State and sister States, and that we will do all we can to further this interest, but we will never knowingly subordinate the health of the people of Mississippi to commerce.

“7. Resolved, Since co-operation between the health authorities of the Southern States is essential to the successful management of yellow fever, and in order that commerce may

not be unnecessarily obstructed, we deem it necessary to insist upon the following requests, made in substance by a representative of this board last September, after he had reason to believe yellow fever existed in the City of New Orleans and was not being reported, said requests being then denied to the representative of our board :

"1. That a representative of the Mississippi State Board of Health, accompanied by a representative of the Louisiana Board of Health, be permitted to make a house to house inspection of such localities in the City of New Orleans and at such localities in the City of New Orleans and at such times as may be indicated by said representative of the Mississippi Board.

"2. That a representative of the Mississippi State Board of Health be permitted to see all cases of sickness which may be reported as suspicious by any local physician of New Orleans.

"3. That a representative of the Mississippi State Board of Health be permitted to visit all the hospitals in the City of New Orleans at such times as said representative may elect. Arrangements for these visits must be made for the season, so that the representative will not have to secure special permission at each visit.

"Resolved (7), That it is the sense of this board that a case of localized yellow fever in a city, said case or cases being in complete isolation and in charge of the health authorities, would not be sufficient cause for alarm or quarantining a city, but that the health and lives of the people of Mississippi may be protected they must have through their constituted health authorities, prompt and full information relative to the health conditions in New Orleans, and with this information the board will be prepared to act in such way as to protect the State and at the same time not necessarily obstruct commerce."

On motion of Dr. Quin the foregoing was adopted and a copy of the resolutions ordered to be sent to Dr. Edmond Souchou, president of the Louisiana State Board of Health.

Medical News and Miscellany.

FOR SALE—About thirty volumes of old, with a few modern, medical books. One each oral, vaginal and nasal speculæ. One pocket aspirator. One Truax-Allen pump. Three pair obstetrical forceps. One obstetrical hook. One medicine case for buggy. Address Mrs. W. P. McMillan, Biloxi, Miss.

NEW ORLEANS POLYCLINIC.—Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, particularly laboratory work. *The twelfth annual session opens November 24th, 1898.* For further information address New Orleans Polyclinic, P. O. Box 797, New Orleans, La. s to ap

CRAIG COLONY PRIZE FOR ORIGINAL RESEARCH IN EPILEPSY.—The president of the board of managers of Craig colony offers a prize of \$100 for the best contribution to the pathology and treatment of epilepsy, originality being the main condition. The prize is open to universal competition, but all manuscripts must be submitted in English. All papers will be passed upon by a committee to consist of three members of the New York Neurological Society, and the award will be made at the annual meeting of the board of managers of Craig colony, October 10, 1899. Each essay must be accompanied by a sealed envelope containing the name and address of the author and bearing on the outside the motto or device which is inscribed upon the essay. The successful essay becomes the property of the Craig colony, for publication in its annual medical report. Manuscripts should be sent to Dr. Frederick Peterson, 4 W. 50th street, New York City, on or before September 1, 1899.

Dr. W. B. Rohmer, formerly of Bay St. Louis, has located at Gulfport. We bespeak for the doctor the friendly consideration of the good people of that town.

WELL KNOWN—WELL LIKED.—The other day the superintendent of one of the largest city hospitals in this country,

said to a representative of The Imperial Granum Company, the manufacturers of that reliable dietetic preparation, IMPERIAL GRANUM: "It is not necessary for your firm to send any one here to tell me about their product for I have used it both in private and hospital practice for over twenty-five years, and can hardly believe that even the youngest members of the medical profession do not know of the merits of this well-known and well-liked food for invalids and convalescents."

A VERY GRAVE ERROR.—Among those who have paid high tributes to the value of antikamnia and who occupy positions of great eminence, may be mentioned Dr. J. Acheson Wilkin and Dr. R. J. Blackham, practitioners of London. They have found it of value in the neuralgias and nervous headaches, resulting from over-work and prolonged mental strain, paroxysmal attacks of sciatica, brow-ague, painful menstruation, la-grippe and allied conditions. Indeed the practitioner who has such cases as the latter come under his observation, who attempts their relief by opiates and stronger drugs, when so efficient an agent can be used, which is much less harmful, commits a grave error. Experience goes to prove that ten grain doses of antikamnia in an ounce of sherry wine, taken every two to four hours, will carry the patient through these painful periods with great satisfaction.—*Medical Reprints*, London, Eng.

Publications Received.

Some Remarks About the Study of Medicine in Germany.—Emil Amberg, Detroit, Mich.

A Case of Punctured Wound of the Skull.—E. M. Holder, Memphis, Tenn.

Mechanical and Surgical Treatment of Fractures of the Neck of the Femur—Arthur J. Gillete, St. Paul, Minn.

Diseases of the Alimentary Canal—Treatment.

Treatment of Acute and Chronic Ulcers.

Malignant Sore Throat and Its Treatment.

The above three by Jas. Osborne DeCourey, East St. Louis,

Ill.

Diseases of the Ear as a Specialty.—Emil Amberg, Detroit, Mich.

Diarrhœa and Bacteria.

Caries of the Teeth and Diseases of the Stomach.

The Early Diagnosis of Cancer of the Stomach.

Above three from the pen of Chas. D. Aaron, Detroit, Mich.

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This building has been erected especially as a Sanatorium for the treatment of the Diseases of Women. It has been constructed with great care and in accordance with the most approved principles of sanitary science. Its equipment with all the appliances necessary for the treatment of disease is complete. It is the endeavor of those in charge to make this a temporary home, as well as a place of rest, where invalids will find every comfort they may desire. Physicians who wish to send patients away from home for the surgical and medical treatment necessary in this class of diseases, may feel confident that everything possible will be done here for their restoration to health.

For further information DR. MAURY can be addressed at the Sanatorium.

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It has Gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic, and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; *hence the preparation is of great value in the treatment of mental and nervous affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, *finds that no two of them are identical*, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, *in the property of retaining the strychnine in solution*, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. Fellows."

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounding them) bear, can then be ascertained, and the genuineness—or otherwise—of the contents thereby ascertained.

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Vol. 2.

No. 2.

May, 1898.

The Journal

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A Monthly Journal of Medicine and Surgery,

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Mississippi State Medical Association, Embracing Its Transactions.

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A Remedy in Nervous Disorders when Characterized by Melancholia.

—Mode of Exhibition.—

The "Reference Book of Practical Therapeutics," by Frank P. Foster, M.D., Editor of *The New York Medical Journal*, which has recently been issued by D. Appleton Co., of New York City, contains an article of which the following is an excerpt, which we feel expresses the consensus of medical opinion as adduced by actual results: "Antikamnia is an American preparation that has come into extensive use as an analgetic and antipyretic. It is a white, crystalline, odorless powder, having a slightly aromatic taste, soluble in hot water, almost insoluble in cold water, but more fully soluble in alcohol.

"As an antipyretic it acts rather more slowly than antipyrine or acetanilide, but efficiently, and it has the advantage of being free, or almost free from any depressing effect on the heart. Some observers even think that it exerts a sustaining action on the circulation. As an analgetic it is characterized by promptness of action and freedom from the disagreeable effects of the

narcotics. It has been much used, and with very favorable results in neuralgia, influenza and various nervous disorders characterized by melancholia. The dose of antikamnia is from three to ten grains, and it is most conveniently given in the form of tablets."

We may add, that the best vehicles, in our experience, for the exhibition of antikamnia are Simple Elixir, Adjuvant Elixir or Aromatic Elixir, as also brandy, wine or whiskey. It can also be readily given in cachets or capsules, but preferably tablets, as well as dry on the tongue in powder form, followed by a swallow of water. When dispensed in cachets or capsules it should be put into them dry. Antikamnia tablets should be crushed when very prompt effect is desired and patients should always be so instructed. The conditions of the stomach frequently present unfavorable solvent influences and they can be thus overcome.

—Notes New Pharm. Products.

In Pneumonia where there is Restlessness.

R Antikamnia (Genuine).....	3 ij
Tinct. Digitalis.....	3 iss
Syrup Doveri.....	3 iij
Mx. Sig.:—Teaspoonful every 3 to 6 hours.	

In Painful Dysmenorrhœa.

R Antikamnia (Genuine).....	3 j
Brom. Potass.....	3 ij
Elix. Aurantii.....	3 iij

Mx. Sig.:—One or two teaspoonfuls every hour in water.—Dunglison's Clinical Record.

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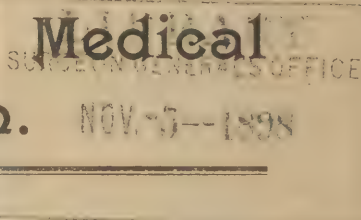
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Acute Inflammation of the Prostate Gland

The *Journal of the American Medical Association* contains a report on inflammation of the prostate gland, which was presented to The Section on Surgery and Anatomy at the Forty-ninth annual meeting of the American Medical Association, held at Denver, Colo., June, 1898, by Listen Homer

Montgomery, M. D., of Chicago, Ills. His plan of treatment in acute inflammation of the prostate gland is to wash out the abscess cavity with hydrogen peroxid, give copious hot water enemas and hot hip baths frequently, avoid morphine internally and advise careful straining of the stool at stool or during micturition. On the theory that toxins are retained in the circulation and within the gland itself, he gives the following treatment: Saturated solution of potassium permanganate, 10 grains to 100 grains of water, taken freely, combined with gum arabic or flaxseed infusion. Along with these remedies the mineral water, particularly Vichy with citrate of potash, go well together. Hydrate of chloral or this salt combined with antikamnia are the very best anodyne remedies to control pain and spasms of the neck of the bladder. These pharmacologic or medicinal remedies are the most logical to use in his judgment, while externally, applications of an ointment of 10 or 20 per cent iodoforn, lanoline, as well as of mercury, are also of value.

Migraine—(Catarrhal.)

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—American Journal Surgery and Gynec.

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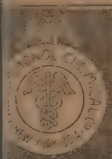
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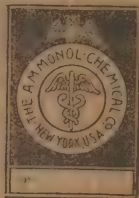
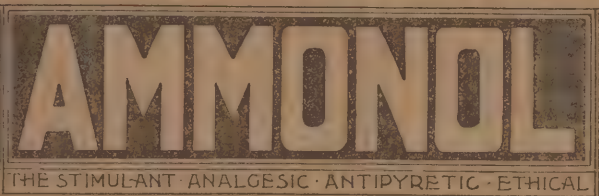
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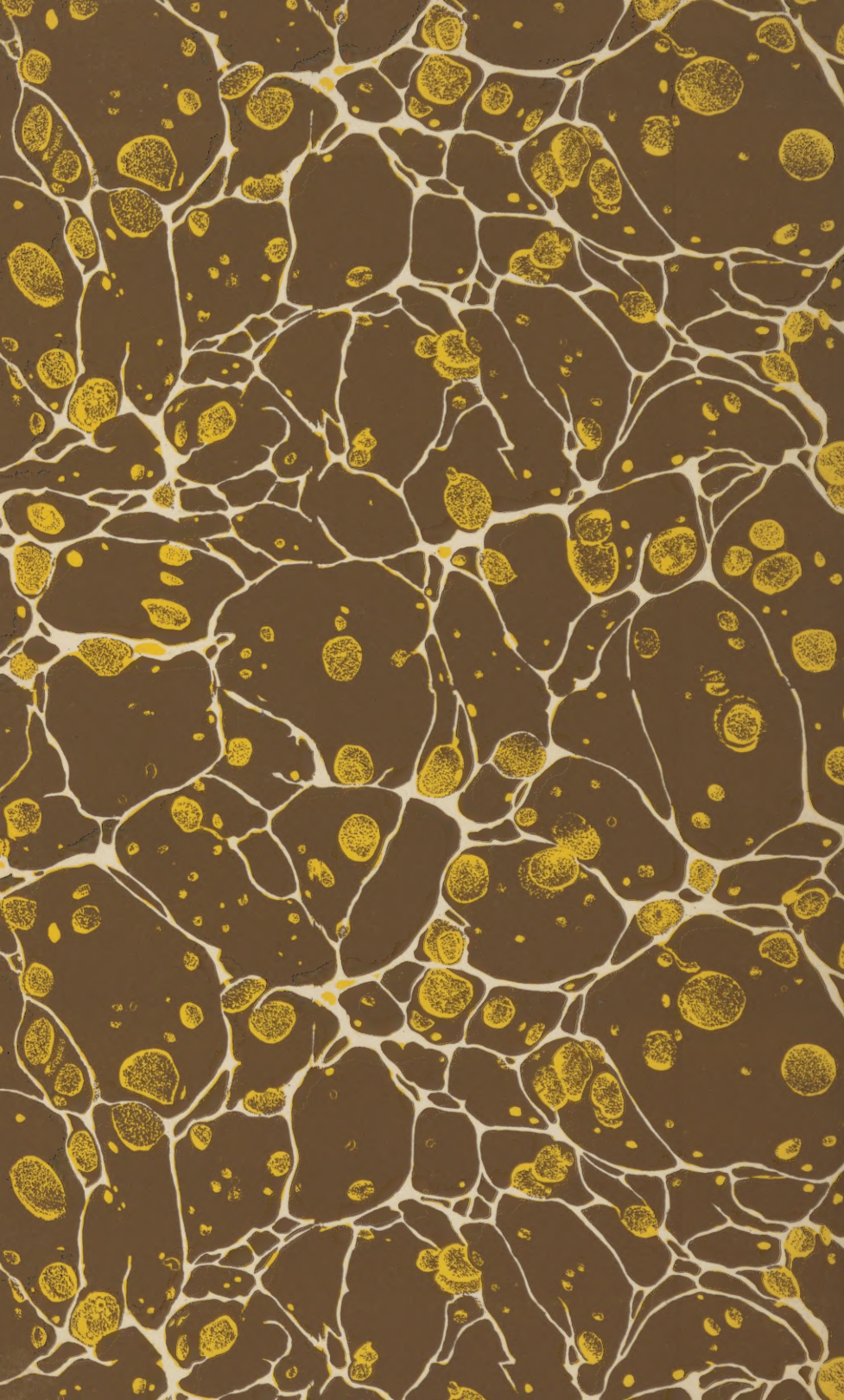
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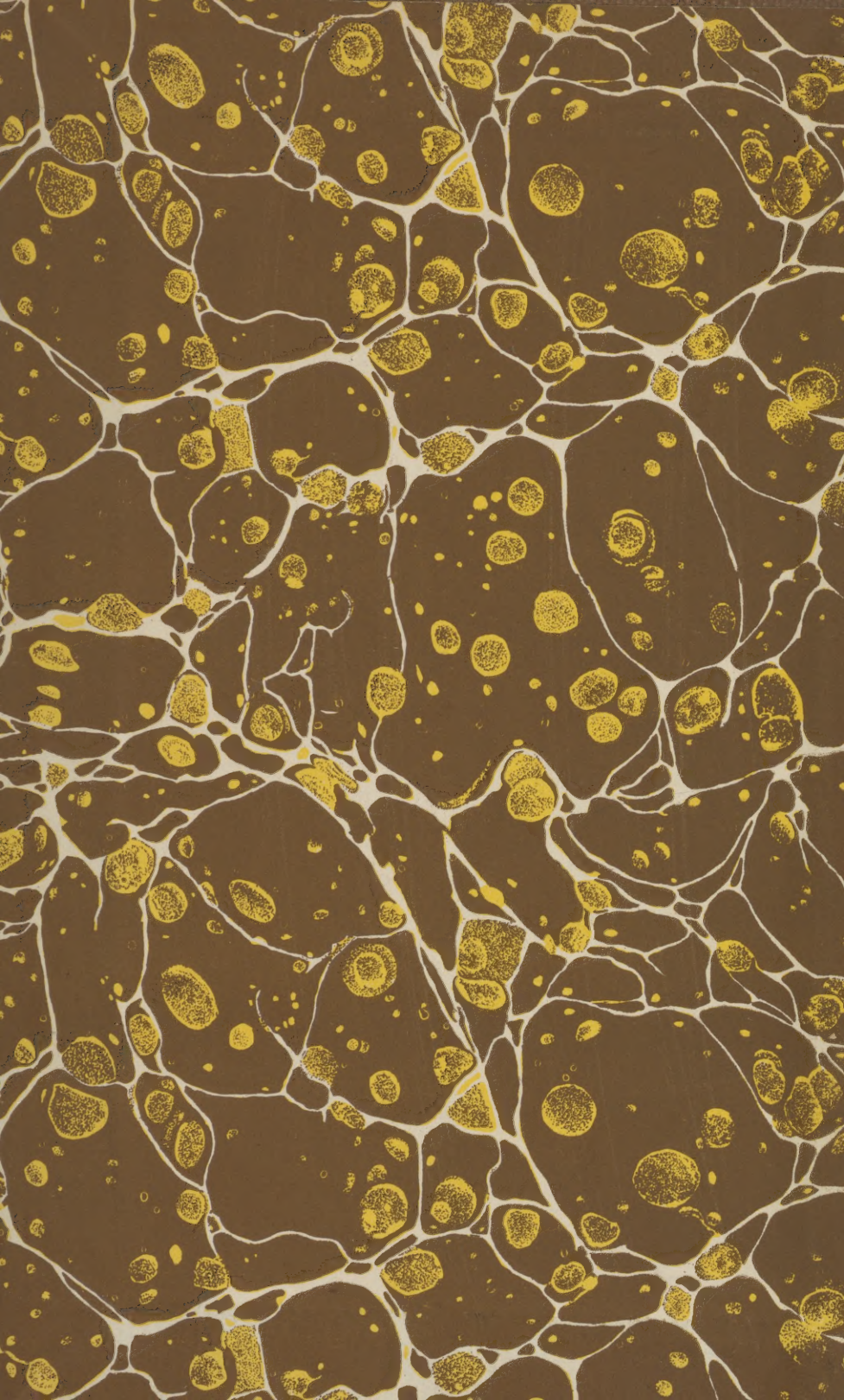
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